Annual Report of the Department of Industries, Bombay Province 1942-43

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ANNUAL REPORT OF THE DEPARTMENT OF INDUSTRIES, BOMBAY PROVINCE, FOR THE YEAR 1942-43.

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CHAPTER I.

GENERAL INDUSTRIAL OUTLOOK DURING THE YEAR.

(i) Review of General Conditions.

The industrial progress of the Province during the year continued to be satisfactory. Apart from the exodus of labour from certain urban areas in the beginning of the year due to war developments on the Eastern Front and stoppages of work as a result of the political turmoil in the country in August—September, conditions of practically full employment prevailed in all the major industries of the Province. Due to the heavy demands of the Supply Department and inflationary tendencies in the country, the rise in prices of industrial goods was steep and continuous and the profit-margin was substantial. The dearth of many consumers goods for civilian use led to the extension of Government control and sugar, paper, iron and steel, etc., were, severely rationed. The cloth and yarn position specially in regard to the spiralling of their prices was giving cause for great anxiety and was under the active examination of the Government of India at the end of the period under review.

Conditions in the small-scale and cottage industries were not dissimilar. Barring handloom weaving and the brass and copperware industry, production appreciably increased and the demand was brisk.

The balance of trade in merchandise during the year was even more favourable for India than last year. The following table shows the size of this favourable balance :—

Balance of Trade in Merchandise in British India.

(In lakhs of Rupees).

—	1938-39.	1939-40.	1940-41.	1941-42.	1942-43.
Imports	151,83	164,76	156,72	173,01	110,34
Exports (including re-exports) ..	169,22	213,57	198,71	252,55	194,60
Balance of trade	+17,39	+48,81	+41,99	+79,54	+84,26

Due to this and the method followed by the Government of India in providing rupee finance to the Allies, money continued to be cheap and abundant. The bank rate was throughout 3 per cent. The following figures show the great increase that took place in the quantity of money in circulation in the country :—

Month.	Total Notes issued. (00,000's omitted).	Notes in circulation. (00,000's omitted).
August, 1939	2,05,94	1,70,29
March, 1940	2,38,37	2,26,88
March, 1941	2,49,91	2,38,87
March, 1942	3,86,42	3,74,97
March, 1943	6,55,42	6,43,58

There was a steep and continuous increase in the cost of living. The working class cost of living index number for Bombay City which was 137 in March 1942 shot up to 208 by March 1943, registering a rise of more than 50 per cent. Though this caused distress in certain sections of the community, the industrial workers were compensated to some extent by increased dearness and war allowances.

Another result of the general financial and monetary situation in the Province was the continued speculative trading at the Stock Exchange. Prices of certain scrips and particularly bullion reached record heights, and the situation was being closely watched by the authorities concerned when the year ended.

2. **Number of Factories.**—There was an appreciable increase in the number of factories in the Province during the year. The relevant figures are given below :—

Year	Number of factories on the Register.	No. of working factories.		
		Perennial.	Seasonal.	Total.
1940	3,460	2,471	847	3,318
1941	3,927	2,718	903	3,621
1942	4,054	2,747	972	3,719

Apart from the increase in the actual number of factories, many of the existing factories carried out extensions resulting in increased production.

3. **Consumption of Electric Energy for Industrial Purposes.**—The electric energy supplied to industrial establishments during the year by the Electric Supply Companies in the Province is shown by the following table. The noticeable decrease in the consumption of electricity in certain regions was mainly due to the prolonged stoppages of work following the political developments of August last.

No.	Territory.	No. of concerns furnishing information.	Units (in lakhs) of electricity supplied to industrial establishments in—		
			1940-41.	1941-42.	1942-43.
1	Bombay City and Bombay Suburban District	3*	5,041·94	5,683·10	5,279·63†
2	Northern Division	10	524·33	684·36	603·72
3	Central Division	10	30·97	34·07	38·99
4	Southern Division	6	8·77	12·07	9·09‡

4. **Industrial Production.**—Production of industrial goods increased substantially during the year. Many of the factories worked two or three shifts.

*Figures of one concern, i.e. Bombay Electric Supply and Tramways Co., Ltd., for the years 1940-41 and 1941-42 are for calendar years and the figures for the group of Tata Hydro-Electric Works are for the year from July to June.

†Figures for 1942-43 relating to the Bombay Electric Supply and Tramways Co., Ltd., are not available and are therefore not included in this total. The Bombay Electric Supply and Tramways Co., Ltd., supplied nearly 29·87 lakhs of units of electricity for industrial purposes in 1941-42.

‡Figures of one concern for 1942-43 are not available. The same concern, however, supplied 1·15 lakhs of units of electricity for industrial purposes in 1941-42.

5. *New Floatations in the Province.*—The general economic and industrial conditions in the country gave a further fillip to the floatation of new joint-stock concerns in the Province. The progress registered can be appreciated from the following statement which gives the figures for the last five years :—

Year.	Companies registered.	Companies which became defunct.	Net increase in the total Number of companies.	Net increase or decrease in the authorised capital of existing Cos. (Rs. 1,000).
1938-39	138	115	23	11,88
1939-40	151	99	52	3,39,70
1940-41	206	103	103	—1,22,48
1941-42	271	80	191	9,87,77
1942-43	340	85	255	18,08,73

Among the new companies registered during the year, there were 8 cotton mills with a total authorised capital of Rs. 11·03 lakhs; one thread mill with a total authorised capital of Rs. 20 lakhs; four concerns for manufacturing textile bobbins with a total authorised capital of Rs. 3·5 lakhs; eight chemical and pharmaceutical concerns with a total authorised capital of Rs. 19 lakhs; three oil mills with a total authorised capital of Rs. 6·75 lakhs; one flour mill with a total authorised capital of *Rs. 1 lakh*; one concern for manufacturing chemicals and dyes with a total authorised capital of Rs. 3 lakhs; one concern for powdering coffee beans with a total authorised capital of Rs. 5 lakhs; three concerns for drawing wire and preparing nails with a total authorised capital of Rs. 3·2 lakhs; one concern for manufacturing sewing machines with a total authorised capital of Rs. 10 lakhs; one tannery with a total authorised capital of Rs. 1 lakh; one glass factory with a total authorised capital of Rs. 2 lakhs; one factory for preparing sugar from jaggery with a total authorised capital of Rs. 20 lakhs; one factory for fruit canning with a total authorised capital of Rs. 1 lakh; seven engineering concerns with a total authorised capital of Rs. 79 lakhs; one concern for manufacturing waterproof articles with a total authorised capital of Rs. 5 lakhs; six cinema studios with a total authorised capital of Rs. 25 lakhs and a dairy with a total authorised capital of Rs. 10 lakhs. Two concerns for the exploitation of mines were also started with a total authorised capital of Rs. 5·5 lakhs; making a total authorised capital of Rs. 230·98 lakhs. No substantial industrial concern went into liquidation during the year.

(ii) A Brief Review of the Developments in the Industries of the Province during War Time.

6. The war developments have brought about great changes in the industrial structure of the Province. The closing of the continent of Europe for trade purposes, the control over foreign exchange, shipping difficulties and the decision of the British Government to make India the arsenal of the Middle Eastern and the Far Eastern campaigns created factual and psychological conditions favourable for rapid industrial advance. Though now and then there have been slight temporary recessions in some industries, the trend has been continuously upward and the achievements

are substantial. The following table shows the extent of the advance in the registered factories of the Province between 1938–42 :—

Industrial Employment in Bombay Province (1938–42).

—	1938.		1942.		Increase in 1942 over 1938.	
	No. of factories.	Average number of workers employed.	No. of factories.	Average number of workers employed.	No. of factories.	Average number of workers employed.
1. Government and Local Fund Factories.	56	20,686	83	65,834	27	45,148
2. Textiles	489	3,39,792	819	3,87,904	330	48,112
3. Engineering	360	28,629	495	48,055	135	19,426
4. Minerals and Metals	34	1,220	46	2,724	12	1,504
5. Food, Drink and Tobacco ..	142	5,766	328	19,200	186	13,434
6. Chemicals and Dyes	204	17,825	217	26,893	13	9,068
7. Paper and Printing	291	11,536	305	11,820	14	284
8. Processes relating to Wood, Stone and Glass	106	6,563	266	21,282	160	14,719
9. Processes relating to skins and hides	24	1,410	54	2,244	30	834
10. Miscellaneous	64	3,859	134	14,096	70	10,237
11. Seasonal factories	725	41,817	972	51,272	247	9,455
Grand Total ..	2,495	4,79,103	3,719	6,51,324	1,224	1,72,221

Between 1938–42 there has thus been an increase of 1,224 factories and the number of workers employed has gone up by 1,72,221. A part of the increase in the number of factories is due to small concerns employing between 10 and 20 persons having been brought on the register for the first time under the Indian Factories Act. Thus under Textiles some 200 out of 330 factories are "handloom factories." The latter are new additions to the factory register.

It will be noted that more than half of the increase in the number of workers employed between 1938–42 is due to Government and Local Fund Factories and Textiles. The former are mostly ammunition factories. The increase in the number of workers in the latter is an indication of the great spurt in the production of piecegoods, particularly cotton piecegoods. The mills are working double and treble shifts wherever circumstances permit. Non-availability of machinery and housing of labour are the only impediments that now stand in the way of further increase in production. The appreciable increase in the number of workers employed under Engineering is partly due to the intense activity in the cotton mill industry and partly due to the general war activity in the country. The same can be said about the increase under "processes relating to Wood, Stone and Glass." In every sphere relating to war and consumers goods feverish activity has been going on in the existing industries and the machinery is being subjected to far greater wear and tear than in normal times. Replacement of machinery and the availability of spares are becoming pressing problems for manufacturers.

(iii) New Industries.

Apart from the expansion in the existing industries, there has come into existence a number of industries which are entirely new to the Province. Industries like the production of dichromates, surgical instruments, producer-gas plants, machine tools, etc., have been newly started and have shown promising results. Although some of them like the manufacture of anti-gas masks, etc., are purely war-time industries and cannot have an assured future under a peace economy, others should be in a position not only to survive but to consolidate their position in post-war years provided that where found necessary adequate measures are taken to safeguard their interests. The following information relating to Bombay City, Suburban District and Ambernath regarding the number and type of new factories in existing industries as well as new factories in industries which are new to the Province, started since the declaration of war, will be read with interest. Similar information about the rest of the Province is not available :—

(a) New factories in existing industries in Bombay City, Suburban District and Ambernath.

	Number of factories.	Average number of workers employed.
1. Government and Local Fund Factories	1	1,024
2. Textiles	17	2,449
3. Engineering	73	6,240
4. Minerals and Metals	13	910
5. Food, Drink and Tobacco	9	307
6. Chemicals, Dyes, etc.	27	1,735
7. Paper and Printing	21	768
8. Processes relating to Wood, Stone and Glass ..	38	1,763
9. Miscellaneous	21	3,642
Total ..	220	18,838

(b) New factories in industries which are new to the Province in Bombay City, Suburban District and Ambernath.

	Number of factories.	Average number of workers employed.
1. Textiles (Surgical dressing and Compressed bandages) ..	2	150
2. Engineering	14	1,457
3. Chemicals and Dyes	7	596
4. Paper and Printing	1	27
5. Processes relating to Wood, Stone and Glass ..	4	156
6. Miscellaneous	10	1,267
Total ..	38	3,653

Steps have been taken to study the requirements of the new industries with a view to recommendations being made to Government for assistance which may be found to be reasonable and necessary so that those that can meet the peace time requirements of the community may continue in spite of the foreign competition. Similarly, plans have been prepared by the Department, and are at present under the consideration of Government, for the absorption of workers displaced at the termination of hostilities from such establishments as Ordnance factories and Engineering and other works in new industries, for which there is a scope in this Province and which can be started immediately on the cessation of hostilities.

(iv) NEW ENTERPRISES ESTABLISHED DURING THE YEAR.

7. (1) **Manufacture of Sulphuric Acid.**—A firm in Bombay erected two new factories, one at Kalyan and the other at Goregaon, for the manufacture of Sulphuric acid. The plant installed at Kalyan is an up-to-date contact process plant of an American-make and has a capacity of 10 tons per day. This Department recommended the firm for priorities for securing the necessary materials for building the factories.

(2) **Laboratory Chemicals.**—A new factory has been started at Thana for manufacturing laboratory chemicals and allied products.

(3) **Synthetic Dye-stuffs.**—The production of synthetic dye-stuffs on a fair scale was begun in Bombay. This Department helped the party in getting the intermediates required for the work. The products were tested by the Industrial Chemist's Laboratory and were found to be of good quality. They are particularly suitable for the printing trade.

(4) **Manufacture of Glass Bottles.**—Three new factories were erected in the Province for manufacturing glass bottles. They are expected to relieve to some extent the province—wide acute shortage experienced in getting glass bottles. This Department assisted the factories in getting the required raw-materials.

(5) **Industrial Alcohol.**—In the last year's report attention was drawn to the possibilities of establishing power alcohol plants in the Province. During this year a factory for the production of alcohol from molasses was established in the Province with the help of this Department. It is satisfactory to note that the entire plant needed in the factory was manufactured in the Province. The alcohol produced in the factory is meeting the war demands.

(6) **Sodium Sulphate from Salt lands at Baramati.**—In the last year's report attention was drawn to the possibility of recovering sodium sulphate from the salt lands at Baramati. A firm has now put up a plant for this purpose and work is expected to begin in the cold weather.

(7) **Sodium Sulphide.**—Some six factories have been started in and around Bombay and one at Poona for manufacturing Sodium sulphide using either the by-product sodium sulphate from bichromate factories or from the manufacture of ammonium chloride, salt, etc. One factory is making sulphide from Barium Sulphate.

(8) **Barium Salt.**—Two factories have been started for the manufacture of barium salts, such as, chloride nitrate, carbonate, etc., from barium sulphate.

(9) **Myrabolam Extract.**—Attention was drawn in the last year's report to the possibility of establishing a myrabolam extract factory in the Province. A party, assisted by this Department, has erected a factory for this purpose in the Province. Production is expected to begin early.

(10) **Straw-board Manufacture.**—About half a dozen small straw-board factories have been erected all over the Province.

CHAPTER II.

WORK OF THE DEPARTMENT FOR ORGANISED INDUSTRIES.

INDUSTRIAL RESEARCH AND PRACTICAL DEMONSTRATIONS FOR THE BENEFIT OF INDUSTRIES.

8. The Department did considerable work for the organised industries of the Province during the year. The various Chapters of this Report, namely, Chapters III, IV, V and XVII give information about the work done. In the present Chapter information is given covering the industrial research work done.

9. **Provincial Industrial Research Committee.**—Government had appointed in 1941 a Provincial Industrial Research Committee with the Adviser in charge of Industries as President and myself as Vice-President to encourage industrial research in the Province. A provision of Rs. 10,000 was made in the budget for financial assistance for deserving schemes of industrial research. Applications were invited for research grants from all the interested parties, particularly colleges and research institutions. Thereafter selected research problems were referred to the Board of Scientific and Industrial Research, New Delhi, to ascertain whether any of the problems were being worked out elsewhere in India so as to avoid unnecessary duplication of work. Four research schemes were put up to Government for approval and sanction.

10. **Grants for Industrial Research work.**— A College has been conducting researches in the manufacture of optical glass for the last one or two years. Towards this end a total amount of Rs. 5,350 had been sanctioned to it by this Department from time to time. The research work is being continued and during the year under review an additional grant of Rs. 1,307 was sanctioned to enable it to purchase certain equipment required for the work.

11. **Industrial Engineer's Workshop, Bombay.**—The work and activities of the Industrial Engineer's Workshop in connection with different industries were restricted during the year under review due to the utilisation of the workshop in respect of the scheme for the use of small scale industry for the manufacture of war supplies. A brief account of the work done is given below :—

(1) **Imitation Gold Thread Manufacture.**—Work in connection with this scheme was continued during the year. A brief course of training gold thread workers at the Industrial Engineer's Workshop in adopting modern methods in their work was laid out and applications were invited from prospective students. Due, however, to the war situation only two candidates came to Bombay and received training. They were specially instructed in the simple methods of recovering gold and silver from discarded plating solutions.

Experiments for the preparation of diamond powder were conducted during the year. Good quality diamond powder could be obtained by using a steel mortar designed for the purpose in the workshop.

Due to the difficulties in obtaining and restrictions in the use of electrolytic copper wire, experiments were undertaken to ascertain the possibility of using brass wire as a substitute for copper wire in the imitation gold thread industry. The method of melting, casting and drawing brass was demonstrated to the gold thread workers at Surat.

Wire annealing and diamond die cutting work was carried out for the Bombay Telephone Co.'s requirements.

(2) **Manufacture of machines, fitments, hand tools, etc.**—The workshop continued during the year the work in connection with the manufacture of fitments, hand tools, etc., for departmental institutions and past students granted assistance under the subsidy-cum-loan scheme described elsewhere in this Report. Details of the work in this connection are summarised below :—

Six glass bangle grinding machines and six glass bangle jointing machines were manufactured and supplied to past trainees.

Three rope driven wooden potter's wheels and three gear driven potter's wheels were manufactured and supplied to the Bassein Co-operative Pottery Glazed Wares Manufacturing Producers' Society Ltd., Manickpur.

Due to the conversion of the Elphinstone High School into a Technical School the Superintendent of the School required particular types of lathes which could not be had easily at a reasonable price. The work of manufacturing these lathes was undertaken by the workshop.

Six machines for making shoe-laces were constructed so as to manufacture and supply laces knee cotton required by military departments.

Samples of awl handles, chisel handles, iron tent pins, etc., were made for guiding small scale industry for the production of war supplies.

(3) **Other Work.**—Hardening and tempering of old steel files was carried out to convert them into razors at the request of a razor manufacturer of Kalyan. The results were satisfactory. Demonstrations were given to a party in the process of renovating old iron nails.

INDUSTRIAL CHEMIST'S LABORATORY, BOMBAY.

12. **New Laboratory Premises.**—The present laboratory is located partly in the Royal Institute of Science and partly in the Old Custom House Yard. The total space available is about 3,000 sq. ft. This space has been found to be entirely inadequate. Government were accordingly pleased to sanction the construction and equipment of a commodious laboratory on the land kindly placed at the disposal of this Department by the Board of Management of the Victoria Jubilee Technical Institute, Matunga, in the compound of the Institute. At the time of writing this Report, the new premises, which are about 9,580 sq. ft. in area are ready and the laboratory is being shifted there.

The following is a brief account of the more important work done in the laboratory during the year :—

(1) **Preparation of drawing pastels.**—A party required French drawing pastels of certain softness. A standard product was obtained and analysed in the laboratory. Thereafter samples of pastels were prepared with success. A number of samples of different colour shades was sent to the Director, Sir J. J. School of Art, for trial opinion. The pastels were found to be quite serviceable and as good as the French pastels. A note on the preparation of the pastels prepared by this Section was supplied to parties interested in taking up the work on a commercial scale.

(2) **Alum Blocks.**—At the instance of a party from Jalgaon, experiments were conducted for the manufacture of alum blocks used for shaving purposes. After some trials, it was found that blocks prepared with alum (90 parts) and glycerine (10 parts) had satisfactory appearance and keeping qualities. The appearance of the final product was found to be dependant upon the type of concentration when the syrupy solution was poured into the moulds. The details of the process were communicated to the party concerned.

(3) **Manufacture of potash chrome Alum.**—This was prepared by dissolving potassium dichromate in minimum quantity of water, acidifying the same with sulphuric acid and then reducing it with a little excess of sulphur dioxide solution. On slow evaporation good crystals of alum were obtained. The process was given to the party who had requested the Department for it.

(4) **Cultivation and distillation of Rosha Grass.**—In co-operation with the Sylviculturist and the Forest Utilization Officer of this Province a scheme for the study of rosha grass was undertaken. The object was to find out : (*i*) the appropriate climatic and soil conditions for growth, (*ii*) the areas where it now grows and the possibilities of increasing the yield, and (*iii*) the type of manure needed for the purpose. Experiments for the distillation of rosha grass were also to be undertaken for finding out the yield and quality of oil. Due to heavy rains during the year the work could not be completed, as the cultivation of the motia variety of rosha grass at the Shahapur Experimental garden (Thana District) proved unsuccessful. The experiments are being continued.

(5) **Work for the Supply Department.**—During the year under report, 700 lbs. of hammer scale of 100 mesh were supplied to an Ammunition Factory. The Supply Department requested this Department whether it would be possible to supply hammerscale passing through 200 mesh. A process was worked out by putting the scale in a ball mill and getting it air-floated so as to reduce it to a fine state. Samples prepared were tested and were approved.

(6) **Starch from arrowroot tubers.**—Experiments were carried out in the laboratory for obtaining starch from the arrowroot tubers available at Mahableshwar. The yield of the starch and its quality were found to be satisfactory and compared well with similar products of foreign make. Demonstrations were given to parties interested in the commercial utilization of the product. Since the production of starch from arrowroot tubers has passed the experimental stage, Government decided to lease the entire area at Mahableshwar where the tubers are grown to the highest tenderer for exploitation. An offer of Rs. 22,004 from a firm in Bombay for a period of two years ending 1st May 1945, was accepted by Government.

(7) **Testing of the Products of local industries and issue of quality certificates.**—During the year under report, 70 test analyses were made on cashewnut shell oils, cloth stamping pastes, lemon oils, soaps, inks, etc. Quality certificates were issued to the parties. Tender samples and check samples of inks, office pastes, typewriter oil, etc., from the Stores Purchasing Section of this Department and the Government Printing and Stationery were also tested and reports submitted.

ALCOHOL-PETROL MIXTURE AS MOTOR FUEL.

13. The question of the use of power alcohol for automobiles and the utilisation of molasses produced as a bye-product by the sugar factories of the Province has been engaging the attention of this Department for some time. The exigencies of war and the necessity of conserving petrol brought the question to the forefront. One of the large sugar factories of the Province was persuaded to instal a modern power alcohol distillery plant of the capacity of three lakhs of gallons a year, which incidentally was made in this Province. Government granted to the factory the necessary license. A Governor's Act was passed which when applied to any area will make the use of petrol-alcohol mixture obligatory in the place of straight petrol. At this stage the Supply Department of the Government of India intimated that rectified spirit was required in large quantities for war purposes and every thing

possible should be done for its increased production. The abovementioned factory was accordingly directed to concentrate on the production of rectified spirit only. One or two other sugar factories are also making arrangements for the installation of the plants for the manufacture of alcohol.

It is well-known that power alcohol can be used satisfactorily as motor fuel in admixture with petrol. The mixture of power alcohol and petrol has been used widely all over the world including different Provinces of India as motor fuel. It may, however, be pointed out that production of power alcohol from rectified spirit involves the installation of an additional distillation column which means an increase in the cost of production of power alcohol.

14. Experiments were, therefore, undertaken by the present Industrial Engineer (Mr. B. Sengupto), assisted by Mr. N. F. Mooraj (Warden of Weights and Measures) and Dr. R. D. Desai (Dy. Head of the Chemistry Department of the Victoria Jubilee Technical Institute) to investigate into the possibility of using rectified spirit in admixture with petrol as motor fuel and their efforts so far have been very encouraging.

At first the use of rectified spirit alone as motor fuel was experimented upon, but it necessitated alterations of the engine compression and carburettor setting for efficient working. The use of petrol in mixture with rectified spirit in different proportions did not entail any change in the automobile engine and hence experiments were confined to the investigation of—

(*a*) The miscibility of rectified spirit with petrol to see if they mix in all proportions and if the mixture does not separate into its components.

(*b*) Minimum and maximum percentage of rectified spirit in the mixture which can be used as motor fuel.

(*c*) Suitability of the mixture as motor fuel and the relative efficiency according to the proportion of rectified spirit in it, and

(*d*) The effect of using rectified spirit-petrol mixture on the lubricating oil, etc.

In the first series of tests it was found that rectified spirit and petrol do not mix properly in all proportions. Up to 36 per cent. rectified spirit in the mixture, the liquid separates into two distinct layers, and above this percentage the two liquids go into mixture well in all proportions. The minimum percentage of rectified spirit in a rectified spirit-petrol mixture should be, therefore, 36.

Investigations on mixtures containing above 36 per cent. rectified spirit show that although 36 : 64 per cent. mixture of rectified spirit and petrol can be used in petrol engines, this mixture does not give maximum efficiency or the maximum power. It was also clear that the characteristics of the 50 : 50 mixture approach the straight petrol characteristics very closely and hence this seemed to be the mixture that is likely to give maximum efficiency and minimum fuel consumption, per horse power hour.

15. It was, however, felt that the production of rectified spirit in the Bombay Province may not be such as to allow the mixture of 36 per cent and over. Further, the distribution of rectified spirit and petrol may vary very widely in different regions. Hence to be useful in practice, rectified spirit and petrol should be made miscible in all proportions. Experiments were, therefore, undertaken in this connection and as a result, it has been found by the above Officers of this Department that the use of a certain stabilizer which is a bye-product of the alcohol industry and which can be made available in the required quantity by the alcohol distilleries themselves, makes rectified spirit and petrol miscible in all proportions.

Extensive road and laboratory tests were carried out with (*i*) a mixture containing more than 36 per cent. of rectified spirit and (*ii*) a mixture with less than 36 per cent. rectified spirit with stabilizer.

These experiments conclusively showed that in order to utilise rectified spirit in admixture with petrol as motor fuel it was not essential to convert it into power alcohol. The mixture of rectified spirit and petrol containing more than 36 per cent. rectified spirit could be used without any difficulty in the same manner as a mixture of power alcohol and petrol in the same proportions. The difficulty so far encountered, was primarily with mixtures containing less than 36 per cent. rectified spirit due to separation of the mixture. The stabilizer found by the Officers of this Department eliminates this difficulty completely and the stabilized mixtures of rectified spirit and petrol containing any percentage of rectified spirit are admirably suitable as motor fuel. The acceleration and hill climbing timing of a car using this fuel are not appreciably reduced as compared with petrol showing thereby that there is no appreciable reduction of tractive effort and power. Altitude and temperature variations have practically no effect except at the start and the engine requires no adjustments to carburettor or ignition system as compared to petrol setting. These tests have so far revealed no injurious effect of this fuel on motor car parts or on engine oil.

16. An application for a Patent has been filed by the above Officers of this Department for the use of the stabilized mixtures of rectified spirit and petrol as motor fuel and as soon as the patent is granted proposals will be submitted to the Military Authorities and the Road Transport Board of the Government of India to examine the possibilities of this mixture as alternative motor car fuel. It is felt that if this fuel is approved by the above authorities it will solve a very difficult and long standing problem.

EXPERIMENTS ON PRODUCER GAS PLANTS.

17. The exigencies of the war situation have brought to the fore-front the question of conserving petrol. One of the directions in which a saving in the use of petrol could be effected is the installation of Producer Gas Plants on commercial motor vehicles. Information regarding steps taken in this matter and the number of vehicles converted to Producer Gas will be found in Chapter XX of this Report. In order that experiments and tests may be conducted for the improvement and standardisation of Producer Gas Plants, Government were pleased to sanction the construction and equipment of a Producer Gas Plant Laboratory in the compound of the Victoria Jubilee Technical Institute, Matunga. This laboratory has been put in charge of Mr. B. Sengupto, the Head of the Mechanical Engineering Department of the Victoria Jubilee Technical Institute and the Part-time Producer Gas Engineer of this Department. Government were also pleased to sanction the purchase of a Station Wagon for the above purpose and accordingly a station wagon fitted with a specially constructed producer gas plant was purchased.

18. Up to the time of writing this Report the following experiments in connection with Producer Gas Plants, charcoals, etc., have been carried out in the Producer Gas Plant Laboratory and on the Station wagon :—

(1) Experiments on effects of water injection on fuel consumption.

(2) Experiments on refining charcoal to improve its quality for use in Producer Gas Plants.

(3) Tests on specially treated charcoal submitted by Forest contractors.

A short summary of experiments Nos. (1) and (2) is given below. As regards No. (3), the results of the tests were submitted to the parties concerned.

19. **Effects of water injection.**—Most of the Producer Gas Plants for motor vehicles put on the market by different manufacturers are dry i.e., no water or steam is drawn inside the generator with the air. Those that admit water with air use so small a quantity of injection water that no appreciable difference is found between the water injection and dry systems of air admission.

It can be established from purely theoretical consideration that "dry" air admission will result in the production of considerable heat which has to be dissipated. But if water in certain quantities depending on the quality of charcoal is injected with the admission air directly into the combustion zone of the generator, it will break up into hydrogen and carbon monoxide and incidentally absorb the excess heat produced by burning charcoal. This will lead to cooler generator, richer gas and reduction in fuel consumption.

A special water carburettor with replaceable jet was made and fitted to the Producer Gas Plant of the station wagon. This could give from 1/4 gallon to 1 gallon of water per hour when the station wagon was running at about 20 miles per hour. A series of tests were then carried out with the "dry air admission" and with "water injection systems."

These experiments clearly showed that—

(1) The charcoal consumption decreases with the increase in the quantity of injection water up to a certain limit depending upon the quality of the charcoal used. After this limit there is no further gain in fuel consumption.

(2) The decrease of fuel consumption is more rapid with small quantities of injection water.

(3) With the usual charcoal available in Bombay Province (containing from 60 per cent. to 70 per cent. of fixed carbon—the samples used for these tests) the quantity of injection water to be used to give the maximum economy of charcoal is about 0·5 lb. per pound of fuel and percentage reduction of fuel consumption at this point is 36·3.

It was also observed during these tests that the generator was appreciably cooler with water injection system than with "dry" injection air.

The significance of the above finding may be well understood from the fact that the present need of charcoal in Bombay Province for Producer Gas Plants alone is about 40,000 tons per year. If a proper system of water injection is introduced it will lead to a saving of 13,000 to 14,000 tons of charcoal annually. In addition it will reduce the number of burnt out generator shells which is so common now.

20. **Charcoal Refining.**—It is commonplace that in order to obtain good results from a Producer Gas Plant one must use the best charcoal available.

The properties of a good charcoal for Producer Gas Plant may be summarised as follows :—

(1) It should be dense and light.
(2) It should have as low a percentage of volatiles as possible.
(3) It should have as low a percentage of moisture as possible.
(4) It should have as low a percentage of ash as possible.
(5) It should have as high a percentage of fixed carbon as possible.
(6) It should be graded.

The greatest difficulty encountered with charcoal in this Province is that it contains too high a percentage of volatiles moisture and ash and hence correspondingly low fixed carbon.

Representative samples supplied by the Forest Department for test had the following compositions :—

	I	II	III
Volatiles	25·00	23·7	31·25
Moisture	3·50	5·7	4·68
Ash	7·69	5·8	5·28
Fixed carbon	63·81	64·8	58·8

All these samples, it will be found, contained a high percentage of volatiles and correspondingly a low percentage of fixed carbon. This is due to the fact that the men who prepare charcoal are illiterate and are not aware of the requirements of good Producer Gas Plant charcoal. Further, charcoal is now prepared by very crude methods.

Experiments conducted in a specially prepared experimental kiln showed that if the charcoal was heated to a dull heat about 900° C for about 2 hours practically all the volatiles were driven out and the resultant charcoal was better from the point of view of Producer Gas Plants as enumerated above.

The composition of the sample charcoal after refining was as follows :—

	II	III
Volatiles	12·27	23·35
Moisture	3·60	4·32
Ash	6·95	8·93
Fixed carbon	77·18	63·4

It was, however, found that the separate refining process was uneconomical in as much as about 25 per cent. of the charcoal to be refined was to be used for preliminary heating up of the kiln. It is, therefore, felt that the refining process should be undertaken before the charcoal is taken out of the kiln by introducing a " blow " by means of fans or blowers so that at the end of the calcining process, the temperature inside the kiln is raised to about 900° C and maintained at that temperature for about a couple of hours. The forest contractors who now make the charcoal may with advantage be given the necessary instructions in this respect. This has been brought to the notice of the Forest Utilisation Officer.

EXPERIMENTAL WORK ON RUBBER SUBSTITUTES.

21. During the year the Department undertook considerable experimental work in connection with the production of a rubber substitute. The results of the work disclosed that a good rubber substitute, designated by me " Puranrub ", can be produced from Euphorbia tirucallia, the " stick " cactus or milk bush cactús (regional language name " sher "). The Director of Agriculture, Bombay, has informed me that the plant in question is found in all the dry districts of the Province and is common in Bijapur, Sholapur, Poona and Ahmednagar districts. " Puranrub " in combination with about an equal quantity of natural rubber together with the necessary chemicals and fillers gives finished products which are similar to articles produced from natural rubber, fillers and chemicals.

The necessary steps have been taken to patent the process of manufacturing " Puranrub ". An application was made to the Controller of Rubber, New Delhi, for the necessary permit for the sale of " Puranrub ". He, however, stated that before such permission could be granted, he should be supplied with the necessary information regarding the mix and curing time for the utilization of " Puranrub " for different purposes. He also wanted samples of " Puranrub ", the finished articles

made from its mixture with natural rubber and test results. Government were at my request pleased to sanction the setting up and equipment of a Laboratory on a temporary basis to enable this work being carried out. The laboratory has been set up at No. 4 Bombay Road, Poona, and experimental work is in progress to enable the Department to meet the requirements of the Controller and later to manufacture "Puranrub" on a semi-commercial scale.

If the work finally succeeds and "Puranrub" is put on the market, it will, it is hoped, relieve to some extent the very great shortage of natural rubber and thus aid the war efforts.

The thanks of this Department are due to the Hindustan Tyre Factory, Bombay, for the assistance rendered during the earlier stages of the work.

CHAPTER III.

WORK OF THE DEPARTMENT FOR ORGANISED INDUSTRIES—contd.

STATE-AID TO INDUSTRIES

22. Financial and other help is given by this Department under the following main heads :—(1) Loans under State-aid to Small Industries Rules, 1935, (2) Loans and Subsidies under the Loan-cum-Subsidy Scheme for artisans, (3) Grants and Loans under a separate Scheme for educated unemployed to start Small Scale Industries of their own, and (4) Loans to Industrial Co-operative Associations.

(*i*) Loans granted under State-aid to Small Industries Rules, 1935.

23. Under these rules, loans are granted for purposes of construction of buildings, wells and other works necessary for industrial operations, for purchase and erection of machinery, plant and appliances, and for the purchase of raw materials. The loans bear compound interest at 5½ per cent. per annum and are repayable in instalments spread over a period not exceeding ten years.

Towards the close of the year a loan of Rs. 1,300 was sanctioned to a party in Bombay for his aerographic printing press. A loan of Rs. 17,500 was sanctioned to a party for the purchase of an ice factory and cold storage at Malwan in connection with fisheries. A detailed reference to this will be found in Chapter XV on Fisheries.

Loans of Rs. 200 each were sanctioned to nine fishermen in the Ratnagiri District to prepare and mend their nets.

Some fisher youths of the Ratnagiri and Kanara Districts were also given loans, free of interest, to extend their businesses. Details of these transactions will be found in Chapter XV on Fisheries.

(*ii*) Grant of Loans and Subsidies to Artisans.

24. The scheme for grant of loans and subsidies to artisans for the purchase of appliances and tools and for providing them with working capital, was sanctioned by Government last year. The scheme is intended for the benefit of the artisans who have been trained in the use of improved appliances in the technical and industrial schools and demonstrations under this Department, in the Reay Art Workshops in the Sir J. J. School of Art and in other approved institutions. An amount up to Rs. 500 is sanctioned for appliances and tools and an amount up to Rs. 250 is sanctioned as working capital to each individual artisan. Half of the amount

sanctioned for appliances and tools is treated as a subsidy while the remaining half, together with the whole of the amount sanctioned for working capital is treated as a loan free of interest repayable in monthly instalments spread over a period not exceeding five years. Arrangements for supply of appliances and tools and raw materials to be purchased from the amounts sanctioned are also made by this Department.

During the year under review, subsidies and loans were sanctioned to 177 artisans. The total amount so sanctioned was Rs. 42,896. The statement below shows the number of artisans helped, industry by industry, and the amounts sanctioned for implements and for working capital :—

Industry	Number of persons helped.	Amounts sanctioned for implements.	Amounts sanctioned for working capital.
1	2	3	4
		Rs.	Rs.
1. Coir and fibre work	29	5,007	1,994
2. Dyeing and printing	1	300	100
3. Weaving	13	328	1,995
4. Glass bangle making	10	2,319	695
5. Art-crafts	11	4,495	1,610
6. Tanning	84	2,175	16,000
7. Leather	1	350	250
8. Cane and Bamboo	10	900	800
9. Boot-Lace	11	1,665	875
10. Lacquerwork	4	144	144
11. Fishery	3	..	750
Total ..	177	17,683	25,213

(*iii*) Loans and Grants to Educated Unemployed to start Industries of their own.

25. At the close of the last financial year, Government sanctioned a scheme for assistance to educated unemployed persons to start or develop industries of their own or to set up in business or trade connected therewith. Under this scheme, grants are to be made to (*i*) educated persons who have been trained in a particular industry to set up in that industry or in business or trade connected therewith, and (*ii*) those already in business, industry or trade with a view to helping them to develop and expand their activities. Grants are given : (*i*) for the purchase of tools, implements, and appliances or machinery, including the cost of erection, (*ii*) for enabling the recipient to tide over the early stages of manufacture on a commercial scale, (*iii*) for helping the recipient to meet losses due to poor production in the beginning, (*iv*) for working capital in special cases, and (*v*) for other similar purposes depending on the circumstances of each case. Applications from more than one person for a joint undertaking are also given consideration. The grant is not ordinarily to exceed Rs. 1,000 and in no case Rs. 2,000 without the special sanction of Government in the case of each applicant applying individually or jointly. Generally 50 per cent. of the grant is considered as a subsidy and 50 per cent. as a loan free of interest repayable in instalments. The repayment of the returnable part of the grant is spread over a period not exceeding five years in equal monthly instalments.

The scheme started functioning for the first time during the year under review and up to the end of the year grants were sanctioned to 35 persons. The total amount so sanctioned was Rs. 37,065 out of which an amount of Rs. 11,707-8-0 was treated as subsidy and the remaining amount of Rs. 25,357-8-0 as loan free of interest, repayable by monthly instalments. The statement below shows the number of persons assisted under the scheme, industry by industry, and the amount of subsidy and loan granted.

Name of Industry or business or trade connected therewith	Number of persons assisted	Amount of Subsidy	Amount of interest free loan	Total amount of grant
1	2	3	4	5
		Rs. a. p.	Rs. a. p.	Rs.
1. Rubber products	2	1,500 0 0	1,500 0 0	3,000
2. Insulating adhesive Tape	1	500 0 0	500 0 0	1,000
3. Art-Crafts	4	1,787 8 0	1,787 8 0	3,575
4. Bobbins	1	750 0 0	750 0 0	1,500
5. Glue from limed raw hides	2	2,000 0 0	2,000 0 0	4,000
6. Hosiery	1	500 0 0	500 0 0	1,000
7. Caustic Soda lye and soap	1	500 0 0	500 0 0	1,000
8. Food and confectionery	4	500 0 0	3,500 0 0	4,000
9. Toilet products	1	225 0 0	225 0 0	450
10. Radio Servicing	1	145 0 0	145 0 0	290
11. Oil extraction	4	1,000 0 0	4,000 0 0	5,000
12. Weaving	2	....	1,550 0 0	1,550
13. Weaving and Dyeing	1	....	1,000 0 0	1,000
14. Engineering	3	2,000 0 0	3,000 0 0	5,000
15. Slate pencils	1	....	1,500 0 0	1,500
16. Chalk sticks	4	300 0 0	1,800 0 0	2,100
17. Tanning	2	....	1,100 0 0	1,100
Total ..	35	11,707 8 0	25,357 8 0	37,065

(*iv*) Loans to Industrial Co-operative Associations.

26. (1) Out of the loan of Rs. 3,78,000 provided by the Government last year to finance the District Industrial Co-operative Associations at the rate of Rs. 2,225 for each unit of 50 handlooms engaged for Supply Department work, an aggregate amount of Rs. 75,650 was advanced to the Associations as follows :—

Name of the Association.	Advance.
	Rs.
(1) Sholapur	8,900
(2) Ahmednagar	26,700
(3) Yeola	20,025
(4) Belgaum	2,225
(5) Bagalkot	8,900
(6) Malegaon	4,450
(7) Dhulia	4,450
Total ..	75,650

The loans are repayable by the Associations when the work in connection with the Supply Department terminates.

(2) An Industrial Co-operative Association in the Belgaum District was granted a loan of Rs 5,200 for its glass bangle making industry on the recommendations of the Co-operative Department.

CHAPTER IV.

WORK OF THE DEPARTMENT FOR ORGANISED INDUSTRIES—(contd.)

MINES AND MINERALS.

27. As usual, the Department collected the annual statistics of mines and minerals in the Province from the District Magistrates. The same were submitted in a consolidated form to Government and the Director of Geological Survey of India, New Delhi.

28. During the year, one prospecting license was granted to a firm for asbestos. Another party was permitted to continue to hold the prospecting licence granted for manganese ore.

29. A firm exploiting the bauxite ore at Tungar Hill, Taluka Bassein, District Thana, found it difficult to carry on its operations due to transport difficulties. On the recommendation of this Department, Government were pleased to exempt the firm from operating the mine. Similar exemptions were granted by Government to parties exploiting the chromite and manganese mines in Ratnagiri and Kanara Districts respectively.

30. The Department dealt with enquiries received from the public in connection with minerals, their places of occurrence, firms dealing with them, etc. The total number of such enquiries dealt with during the year under report was 72 as against 65 in the last year.

CHAPTER V.

WORK OF THE DEPARTMENT FOR ORGANISED INDUSTRIES—(contd.)

31. In this Chapter information is given covering such forms of assistance as :— (*a*) solving of practical difficulties in processes of manufacture, (*b*) rendering of technical advice in regard to estimates, machinery etc., (*c*) general assistance in the matter of securing facilities and concessions and (*d*) investigating the scope for the starting of new industries. Short notes on each one of these are given below.

32. **Solving of Practical Difficulties in the Processes of Manufacture.**— A number of requests was received during the year for the solution of practical difficulties in the processes of manufacture. The parties were assisted in the matter.

33. **Technical Advice Rendered.**—Many firms and individuals interested either in starting new industries or in extending their plants requested this Department to supply them with detailed estimates and advice. This was done. Similarly, technical advice was solicited on a number of occasions. Below are given one or two illustrative cases of the assistance rendered :—

(1) A process of etching on steel blades was supplied to a party.

(2) Information regarding the extraction of pectin from tamarind seeds was given to a firm interested in the trade.

34. **General assistance.**—The following are some of the more important instances of general assistance given :—

(1) A bobbin manufacturing factory found it difficult to get crude oil for its engines. At the instance of this Department, the Controller of Supplies sanctioned the necessary quantity of crude oil to the factory.

(2) A confectionery works at Belgaum experienced great difficulties in getting the required quantity of sugar. On the recommendation of this Department, the District Magistrate of Belgaum gave the necessary permit to the establishment.

(3) A party was assisted in getting light creosote oil for its requirements.

(4) A factory manufacturing glue from tinned raw hides was considerably handicapped due to lack of electricity supply. Their case was recommended to the Electric Supply Company.

(5) Many industrialists approached this Department to use its good offices in securing them transport priorities from the Board of Transport, Bombay. They were assisted in the matter.

(6) A company which has been granted under the recommendation of this Department forest land and forest concessions by Government for its plywood factory at Supa in Kanara District was helped in securing priorities for its requirements.

(7) During the year under review, another company was granted under the recommendation of this Department forest land and concessions by Government for starting a plywood factory at Dandeli in the Kanara District.

SCOPE FOR NEW INDUSTRIES.

35. (1) **Small-tools Manufacture.**—Small tools like spanners, hammers, chisels, pliers, etc., are needed in great quantities in industry. Hitherto, they were mostly imported from abroad. There is great scope for this industry in the Province.

(2) **Solvents of Alcohol.**—With the establishment of factories for the manufacture of industrial alcohol in the Province, there would be ample supplies of alcohol available for industrial use at reasonable prices. One of the outlets for this cheap alcohol would be the production of industrial solvents such as ethyl acetate, acetone, etc., which are used in such industries as lacquers, leather cloth manufacture, etc. There is a good market for these solvents in the Province.

(3) **Light Calcium and Magnesium Carbonate.**—Waste carbon dioxide of almost hundred per cent. purity is available in large quantities in the Province from the industrial alcohol factories. A very good outlet for this carbon dioxide appears to be in the production of light calcium and magnesium carbonates which are used in large quantities in the manufacture of rubber goods, boiler insulation, tooth pastes, etc. This manufacture should form a very good side industry to industrial alcohol manufacture.

(4) **Plastics from Oil-cakes.**—Soya bean oil-cake is being utilised for the manufacture of plastics in U. S. A. in ever increasing quantities. The inedible oil cakes of "neem", karanj, castor, etc., produced in the Province could be similarly utilised in the plastics industry. There appear to be good possibilities of this industry in the Province.

(5) **Industrial Machinery.**—On the termination of hostilities there is bound to be a big demand for textile and other industrial machinery, electrical manufactures and power plant. Bulk of such machinery has so far been imported. There would seem no reason why steps should not be taken to manufacture such requirements of our industries in this Province immediately the war is over.

(6) **Artificial Silk Yarn Industry.**—Attention is drawn to the Annual Report of this Department for 1939–40 wherein the possibilities of an artificial silk yarn industry in the Province were indicated. The imports of such yarn in 1939–40 were worth more than Rs. 2 crores. This Province has the principal raw materials needed in the industry. There is a good *prima facie* case for this industry.

CHAPTER VI.

WORK OF THE DEPARTMENT FOR COTTAGE INDUSTRIES.

VILLAGE INDUSTRIES EXPERIMENTAL WORKSHOP, POONA.

36. The Policy of this Department in connection with cottage industries is a comprehensive one. It covers :—(1) experimental work to devise improved appliances, processes, etc., (2) training of the artisans and others in the use of these, (3) grants of subsidies and loans to trained artisans, (4) marketing the products of the artisans and (5) organisation of the artisans in co-operative associations. The work of the Department in these directions is described in Chapters VI, VII, VIII, IX, X, XI, XII, XIII, XIV, XV and XVIII. The present chapter deals with experimental work in the interest of cottage industries conducted in the Village Industries Experimental Workshop, Poona.

37. The Village Industries Experimental Workshop, Poona, continued its activities in connection with designing, construction and testing of improved appliances and training of artisans. It also carried out work in connection with the scheme for the use of small-scale industry for the production of war supplies. A brief account of the work done is given in the following paragraphs :—

DESIGNING, CONSTRUCTION AND TESTING OF IMPROVED APPLIANCES.

38. The following appliances were designed and constructed during the year under review :—

(1) Improved type feeding arrangement for a Raspador Machine,

(2) Improvements in the yarn printing machine constructed last year,

(3) Screw type spiral winding machine,

(4) Rag cutting machine—(*a*) Knife type and (*b*) Rotating cutter type, and

(5) Taper turning arrangements for the manufacture of pick axe helves required for war supplies.

MANUFACTURE OF IMPROVED FITMENTS FOR SUPPLY TO DEPARTMENTAL DEMONSTRATIONS, ETC.

39. With a view to economising in the cost of supplying improved fitments to the departmental institutions for their work and to the students trained in the various institutions, the following fitments were manufactured in the workshops :—

(1) Four sets of tools were manufactured and supplied to the new Lacquer Work Demonstration at Belgaum.

(2) Twenty wooden pestles were manufactured for the improved oil ghany designed by this Department.

(3) One oil ghany was fitted with new wooden lining whereas in one case three caps were fitted with shafts.

(4) Two bangle joining machines, two bangle grinding machines and three solid rollers for spiral winding machine were prepared for past students under loan-cum-subsidy scheme.

(5) Six improved types of yarn printing machines were manufactured during the year.

(6) Samples of pick axe helves 4½ and 6½ lbs., Awl handles, large and small, Clasp, Cook's Butcher's and Table knives, Camouflage nets, Shovels, Hammer and Chisel Handles as required under the scheme for the use of small scale industry for the production of war supplies were manufactured for the guidance of cottage workers interested in such work.

PRACTICAL FIELD TESTS.

40. **Village Oil Industry.**—During the year under review arrangements for the introduction of the improved type of ghani were continued. One ghani maintained at the Village Industries Experimental Workshop, Poona, was utilised in demonstrating its working and advantages over other ghanies to telis and visitors to the workshop. The oil and oil-cakes produced had a very good demand. People were allowed to have their own oil-seeds pressed in this ghani on hire system to enable them to judge the utility of the ghani and obtain pure, unadulterated oil from their own seeds.

The Dapuri Workshop was requested to manufacture for this Department 30 ghanis sanctioned by Government for the year under review for introduction amongst telis on subsidy-cum-loan basis. Due, however, to transport difficulties and urgent war work on hand only seven sets were ready. It is hoped that the remaining sets will be ready in the early part of the next financial year.

During the year under review four ghanis were installed in the Nasik District—one each at Nasik, Yeola, Nandgaon and Niphad—three in the Belgaum District—one each at Kudchi, Nandgaon and Belgaum—and one at Kasod in Satara.

Experimental work was also conducted in connection with the development of the Village Oil Industry. Decortication as well as pressing of non-edible oil-seeds like neem seeds was tried to ascertain the commercial possibilities of the products. This work is still in progress and is expected to be completed during the next financial year.

Oil-seeds were also tested for their oil contents by chemical extraction at the Agricultural Chemist's Laboratory at Poona with a view to comparing the oil yield efficiency of the ghanis.

TRAINING OF ARTISANS.

41. (1) The training class in improved cottage glass and glass bangle manufacture organised at the Village Industries Experimental Workshop in January, 1941, was continued during this year also. Twenty-one glass workers—seven from Belgaum District, seven from Bijapur District, five from East Khandesh District and two from West Khandesh District were trained in the methods of glass and glass bangle manufacture by modern methods and with improved implements.

(2) With a view to acquainting the telis with the utility of the improved oil ghani a training class was organised at the Village Industries Experimental Workshop from July, 1942. The duration of the course of training was fixed at one month and telis from different districts were admitted. Twenty-three telis—9 from Belgaum District, 1 from Bijapur District, 1 from Satara District, 11 from Nasik District and 1 from Surat District—were trained during the year under review.

CHAPTER VII

WORK OF THE DEPARTMENT FOR COTTAGE INDUSTRIES—(contd.)

HAND WEAVING INDUSTRY

42. The Department maintained nine Cotton Weaving Schools, one Wool Weaving School, six Cotton Weaving Demonstrations, three Wool Weaving Demonstrations and three Dyeing and Printing Demonstrations for the benefit of the handloom weaving industry. A brief account of their work is given below.

43. **Weaving Schools.**—All the nine schools worked satisfactorily in the different centres where they were located. They were able to introduce fly-shuttle looms as detailed below :—

Division	District	Place	Number of flyshuttle looms introduced
Southern Division	.. Dharwar	.. Ranebennur ..	11
Do.	.. Do.	.. Hubli ..	33
Central Division	.. Ahmednagar	.. Pathardi ..	14
Do.	.. Nasik	.. Yeola ..	92
Do.	.. East Khandesh	.. Nasirabad ..	12
Northern Division	.. Thana	.. Bhiwandi ..	....
Do.	.. Ahmedabad	.. Bavla ..	5
Do.	.. Kaira	.. Valsan ..	5
Do.	.. Do.	.. Ode ..	4

In addition 52 dobbies and 27 beams were also introduced by these schools.

44. **Wool Weaving School.**—This school was continued at Motebennur in the Dharwar District with eight students on roll who completed their training in July 1942. A fresh batch of ten students was admitted in August 1942. This batch completed its training in January 1943.

The school also provided facilities for training women in improved methods of carding and spinning of wool.

45. **Cotton Weaving Demonstrations.**—The six demonstrations worked at the different centres detailed below and introduced the number of looms mentioned against each centre :—

Division	District	Place	Number of flyshuttle looms introduced
Southern Division	.. Belgaum	.. Bailhongal ..	....
Do.	.. Do.	.. Gokak ..	....
Do.	.. Bijapur	.. Tamba ..	....
Do.	.. Do.	.. Ilkal ..	6
Central Division	.. Sholapur	.. Mohol ..	42
Do.	.. Satara	.. Kolewadi ..	....
Do.	.. Ahmednagar	.. Sangamner ..	....

In addition, 50 dobbies were also introduced by these demonstrations.

The demonstrations at Tamba could not show any progress due to the illness of the demonstrator who was on leave and ultimately died. The Kolewadi demonstration was transferred to Sangamner.

The services of the demonstrators at Gokak and Sangamner were utilised in connection with the Government Production Centres organised for the supply of hand woven cloth for war requirements. A mention of these has been made in detail elsewhere in the Report.

46. **Wool Weaving Demonstrations.**—(*a*) The demonstration working at Bijapur last year was continued at the same place during the year under report. Sixteen students received training in carding, spinning, dyeing and weaving of wool. The Collector of Bijapur continued to grant scholarships of Rs. 6 each per month from the Anti-Famine Institute Funds.

The spinning class attached to the demonstration in charge of a female staff was well attended during the year and eighteen Kurbar women were trained in carding and spinning of wool by improved implements.

As a result of the activities described above, three fly-shuttle looms, fifteen spinning wheels and nineteen carding bows were introduced. From the funds at his disposal, the Collector of Bijapur made a gift of 13 spinning machines to the women students trained by the demonstration.

(*b*) The second wool weaving demonstration continued to work at Ansari-Budruk in Ambegaon Peta in Poona District. Fifteen weavers were trained during the year.

(*c*) The third wool weaving demonstration was mainly engaged in war supplies work at Miri in Ahmednagar District. The demonstrator in charge supervised the work of spinning of yarn and weaving of army blankets. Forty spinners on an average were kept engaged on wool spinning throughout the year under report. Besides this the demonstrator also showed to the weavers the weaving of chaddars with cotton warp and woollen weft. These union chaddars woven at the demonstration were very popular and received a good demand.

47. **Dyeing Demonstrations.**—(*a*) One Dyeing Demonstration continued to work at Khasbag in Belgaum District. As the situation arising out of war continued to affect the colours and chemicals market, attention was diverted to the use of the vegetable colouring materials.

The local dyers and weavers took interest and began to use in some respects the locally available colouring materials.

The yarn printing machine designed by the Department attracted the attention of the local printers, four of whom got manufactured machines of this type. Similarly screen printing for printing of hand bags and *chintz* material was commenced by two persons—one at Khasbag and the other at Pandharpur—as a result of the activities of the demonstration. The workmen of two local knitting factories were trained in dyeing and bleaching. They are reported to be doing well.

Experiments in connection with the preparation of rapid fast colours from napthol and basics conducted at the demonstration last year proved successful. Two printers received training in the preparation of rapid fast dyes from napthol colours.

Two new small-scale dye-houses came into existence during the year.

During the year under review the demonstration trained 8 dyers, 3 printers, and 22 weavers who attended as regular students whereas 6 dyers, 2 printers, 10 weavers and 5 others who came from Hubli, Gadag, Ilkal, Guledgud, Sholapur, Ranebennur, Wai, Hukeri and Nipani received technical advice and assistance in their requirements as casual students.

(*b*) The second dyeing demonstration continued its activities at Sholapur during the year under review.

In the summer vacation (May 1942) five school-going students from the weavers' and dyers' families attended the dyeing demonstration and learnt the different processes of dyeing and printing.

Two local silk dyers were trained in dyeing of artificial silk in different shades. Six persons were given practice in block printing. One local saree manufacturer was trained in yarn printing which enabled him to produce sarees of variegated designs and colour schemes. As a result of the assistance rendered a dyer of Mohol in Sholapur District set up 15 handlooms at Sholapur in addition to those maintained by him at Mohol as he started dyeing his own yarn by modern methods. One handloom weaver after receiving training has set up his own dye-house on a small scale.

One merchant of Karkamb received training in dyeing of yarn and on return to his place began to supply dyed yarn locally to the weavers which has helped them much.

Every possible assistance was given to the District Industrial Co-operative Association, Ltd., Sholapur, organised for affording marketing facilities to handloom industry, in connection with the dyeing of its yarn for bunting cloth required for war supplies in ten different shades approved by the Indian Stores Department.

People from Mohol, Karkamb, Valsang, etc., casually attended the demonstration for technical advice and solution of difficulties in their work.

Ordinarily 50 to 60 samples a month of dyestuff powders, dyed yarns, etc., were tested at the demonstration for the benefit of the local dyers, merchants, brokers, retail sellers and consumers.

The demonstration trained during the year under review 6 dyers, 2 printers, 4 weavers and 8 others who regularly attended the demonstration. In addition, 6 dyers, 2 printers, 4 weavers and 12 others attended the demonstration as casual students.

(*c*) The third demonstration continued its activities at Dholka in Ahmedabad District till the end of December 1942. It was then transferred to Modasa in the same district in January 1943.

When at Dholka the demonstration trained six persons in bleaching of cotton and artificial silk, dyeing of yarn with Napthols, Indenthrene, Indigosol and Diazo dyestuffs and dyeing of silk with fast colours. Demonstrations were also given in dyeing a number of shades with vegetable dyes locally available. As a result of these activities, six small dye-houses came into existence.

Six weavers were also trained in yarn printing whereas four weavers were given instructions in tying and dyeing of cotton yarn with Indenthrene and Indigosol dyestuffs. Ten students were trained in block printing with rapid, fast and deep colours whereas three received training in mica, spray and screen printing.

During the year under review 6 dyers, 4 printers and 6 weavers attended the demonstration regularly whereas 8 dyers, 8 printers, 4 weavers and 2 others attended the demonstration as casual students and received advice and guidance in their work. The demonstration soon after its transfer to Modasa attracted some thirteen students to join it. These students were under training at the close of the year.

48. **Expenditure on Peripatetic Weaving and Dyeing Institutions.**—Details of the income and expenditure of the peripatetic Weaving and Dyeing institutions will be found in Appendix A.

49. **The Government Hand Weaving Institute, Poona.**—The twenty-one students on roll who were undergoing training appeared in the sessional examination held by the Committee of Direction for Technical and Industrial Training, Bombay, in April 1942. It is gratifying to note that all of them were successful.

Government were pleased to sanction in May, 1942, a scheme for the conversion of the Institute into a Power Weaving Instructional Institute and directed its transfer to Sholapur. Steps were immediately taken for the purchase of the requisite power weaving machinery as sanctioned by Government but due to the war situation it could not be had readily. Further, enquiries conducted at Sholapur for suitable premises to locate the Institute there were not successful. Provision had also to be made for the completion of the course of the students who passed the first year Advanced Course and were promoted to the second year Advanced Course.

Under the circumstances the new session of the Institute was commenced at Poona on the following lines :—

The artisan course was abolished. The students who passed in the first year Advanced Course and were promoted to the second year Advanced Course were offered the option to avail themselves of the training in power loom weaving for the second year. New admissions were granted to students for power loom weaving under the new scheme. The Institute thus imparted instruction in power-loom weaving with the equipment available. Negotiations were at the same time continued with different parties for additional machinery and suitable premises at Sholapur.

Expenditure.—The expenditure incurred on the Institute during the year is given in Appendix B.

CHAPTER VIII.

WORK OF THE DEPARTMENT FOR COTTAGE INDUSTRIES—(contd.)

TANNING INDUSTRY.

50. The six Tanning Demonstration Parties maintained by this Department during the last seven years have been able to visit every district of the Province effecting an all-round inprovement in the standard of work of the rural tanners who are now able to produce various classes of leathers which were hitherto either imported from abroad or obtained from other Provinces. During the year under review these Tanning Demonstration Parties visited the following 10 centres. These centres were chosen in consultation with the Collector and Chairman, District Rural Development Board of the District in each case.

Centre.	District.	Duration of Demonstration.
(1) Bijapur	Bijapur	From 14th October 1941 to 24th July 1942.
(2) Bagalkot	Do.	From 27th July 1942.
(3) Hansapur	Surat	From 18th February 1942 to 12th November 1942.
(4) Vapi	Do.	From 16th November 1942.
(5) Bhagur	Nasik	From 4th February 1942 to 10th October 1942.
(6) Vani	Do.	From 19th October 1942.
(7) Dholka	Ahmedabad	From 9th August 1941.
(8) Mahad	Kolaba	From 1st March 1942.
(9) Mirgaon	Ahmednagar	From 20th March 1941 to 1st June 1942.
(10) Baramati	Poona	From 5th June 1942.

(1) **Bijapur, District Bijapur.**—The most important point about this centre was that tanners from the neighbouring villages attended the demonstration and received the necessary information and instruction.

(2) **Bagalkot, District Bijapur.**—At this centre the tanners from the neighbouring villages attended the demonstration and received technical hints about their difficulties.

(3) **Mahad, District Kolaba.**—About 25 tanners received training and they adopted improved methods of tanning. The output of this place has improved both in quality and quantity.

(4) **Dholka, District Ahmedabad.**—There are 100 houses of tanners at this centre. The demonstration work at the centre was quite successful. The output and the quality of goods turned out showed an all-round improvement. Bag tanning of buffalo hides was not known at this centre and its introduction proved to be very popular.

(5) **Hansapore, District Surat.**—There are 16 houses of Khalaps (tanners) working in the industry and all of them received the benefit of the tanning demonstration. The number of learners at the beginning was 9 and it increased to 18 at the end. The monthly output at the centre increased from 7 buffalo, 10 cow and 10 calf hides to 30 buffalo, 100 cow and 50 calf hides. The District Rural Development Board granted a sum of Rs. 100 to construct a bag tan-pit for sole leather manufacture and Rs. 550 for sinking a well at the tanning demonstration centre.

(6) **Vapi, District Surat.**—There are about 15 houses of village tanners and almost all chamars attended the demonstration. The daily attendance in the beginning was 6 and it increased to 17 at the end. The monthly output also increased to four times. The District Rural Development Board sanctioned a sum of Rs. 150 to construct a well and purchase a pump with a view to improving water supply.

(7) **Bhagur, District Nasik.**—The daily attendance in the beginning was 5 and it gradually rose to 27. The Chairman, District Rural Development Board, Nasik, gave a loan of Rs. 15 to each of the ten local chamars and granted Rs. 250 for erecting a shed for the centre. An important feature of the centre is that the tanners have established a co-operative society known as " The Bhagur Co-operative Leather Work Society ".

(8) **Vani, District Nasik.**—There are 15 houses of chamars at the centre. The daily attendance at the demonstration in the beginning was 5 and it increased to 20 at the end. The monthly output of the tanners gradually increased and they now do not find any difficulty in disposing of their finished products as the major part is being consumed by themselves for stitching mots.

(9) **Mirgaon, District Ahmednagar.**—Owing to the establishment of the demonstration at this centre, the general output increased from 100 buffalo and cow hides per month to 325 hides and 75 calf and 50 sheep and goat skins per month. The quality of leather turned out showed a considerable improvement with the obvious consequence that it brought good financial returns to the tanners.

The manufacture of glue was demonstrated at this centre and the glue manufactured by some of the tanners during the last cold season was sold at a good price. Tools and equipment worth Rs. 118-8-0 were made available to the tanners.

(10) **Baramati, District Poona.**—There are about 30 houses of Dhors (chamars) at the centre. Before the advent of the demonstration the dhors were doing only bag tanning of buffalo hides of a very poor quality while manufacture of light leather

and dyeing and finishing was unknown to them. This has been now introduced with remarkable results. The manufacture of glue was also demonstrated at this centre.

51. **Work of the Tanning Demostrators.**—The Demonstrators guided the village Mahars and others in the treatment of the raw hide or skin which was ultimately sold to the tanners. They advised the tanners in all matters relating to the industry right from the purchase of the raw material to the sale of the finished products. The demonstration parties demonstrated the various processes in the manufacture of leather. Alongside of the demonstration, the work that was being handled by the village tanners in their own tanneries was also supervised by the Demonstrators.

The work of the tanning demonstration parties has been very satisfactory and has resulted in much benefit to the village tanners.

52. **Work at the old Demonstration Centres.**—During the year under report many of the tanning demonstrators were asked to pay periodic visits to old demonstration centres so as to keep in touch with the work already done at these centres. Some village tanners from old centres also paid visits to the Government Tanning Institute, Bandra, during their visits to Bombay to consult the Tanning Expert. The Tanning Expert also paid a few visits to the former demonstration centres when he was on tour and in this way a regular contact was maintained with the old centres.

53. **Technical advice and help to the trade.**—A number of tanners and people connected with the trade continued to seek the advice of the Tanning Expert of the Department in the solution of their difficulties. Several enquiries were made regarding the manufacture of glue from tannery wastes which were answered by this Department with necessary information.

54. **Tours.**—During the year under report the Tanning Expert spent 33 days on tour to organise and inspect the work of the Demonstration Parties and to give technical advice where necessary.

55. **Expenditure.**—The total expenditure incurred during the year on the tanning parties was Rs. 11,753-2-6 and the receipts were Rs. 217-14-0 as detailed in Appendix C.

CHAPTER IX.

WORK OF THE DEPARTMENT FOR COTTAGE INDUSTRIES—(*contd.*)

SERICULTURE INDUSTRY.

56. Mr. E. S. Ramanath, the Sericulturist of this Department who carried out the sericulture survey of this Province and organised the Silk Farm of this Department at Belgaum died on 21st February 1943. He hailed from Mysore and his services were lent to this Department by the Mysore Government. The Department has lost in Mr. Ramanath a very hard working and capable man.

57. **Gardening.**—Out of the 5 acres of land acquired for mulberry cultivation at the Belgaum Silk Farm nearly 3 acres were planted during the year 1941-42 and another half acre was added during the year 1942-43. Seedlings were raised from seeds received from Madras, Bengal and Kashmir in specially prepared nursery beds and these were in due time transplanted. Some of these plants are being trained up as standards.

The plants grown in 1941-42 were pruned during the year and the plots manured with farm yard manure secured from the Military Dairy Farm at Belgaum.

The monsoon did not come up to expectations during the year. Arrangements had, therefore, to be made with the jail authorities to supply 5,000 gallons of water a day for irrigational purposes during several months of the year.

58. **Rearing of silk worms.**—There was an adequate supply of mulberry leaves from the garden and as many as 16 rearings were conducted with good results.

Seeds for these rearings were in most cases raised in the Farm and on a couple of occasions seeds were secured from Mysore and Bengal.

The following varieties of seeds were received from outside stations :—

(1) Pure Mysore (2) Mysore Cross	from Mysore.
(3) Nismo. (4) Nistid. (5) Nistari.	Bengal.

59. The following disease-free layings were prepared at the Belgaum farm :—

(I) PURE RACES.

(1) Japanese, (2) Mysore Pure, (3) Nismo, (4) Nistid and (5) Nistari.

(II) CROSSES.

(1) Nistid × Mysore Japanese, (2) Mysore Japanese × Nistid, (3) Nismo × Mysore Japanese, (4) Mysore Japanese × Nismo, (5) Nismo × Mysore, (6) Japanese × Nistid, (7) Japanese Nistid × Japanese, (8) Japanese × Nistid Mysore Japanese, (9) Nismo Mysore Japanese × Mysore Japanese Nismo, (10) Mysore Japanese Nismo × Nismo Mysore Japanese, (11) Mysore Japanese F2 × Nismo Mysore Japanese, (12) Mysore Japanese F2 × Mysore Japanese Nismo, (13) Mysore Cross, (14) Mysore × Nismo, (15) White × Nistid, (16) Mysore Japanese × Mysore Japanese Nismo × Mysore Japanese Nismo × Nismo Mysore Japanese, (17) Mysore Japanese × Mysore Japanese Nismo × Mysore Japanese, (18) Mysore × Mysore Japanese, (19) Japanese Nistid Japanese × Japanese, (20) Japanese × Nistid Mysore × Japanese, (21) Japanese × Nistid Mysore and (22) Nismo × Japanese.

During the year under report six crosses out of these were found unsuitable and they were, therefore, discontinued. At the close of the year under review, sixteen crosses, including Mysore cross and pure races were under operations. Out of these only those which would, in due course, be found most suitable would be selected for mass rearing.

During the period of different cross and pure races detailed above 553 disease free layings were reared and 344 lbs. and 9 tolas of raw cocoons were obtained. The percentage of yield of cocoons of pure races reared at the farm varied from 40 to 63 and that of cross breeds varied from 47·5 to 89.

The results of the first nineteen rearings conducted during the year 1941–42 were printed on pages 44–45 of the Annual Report of that year. The results of the further rearings viz. Crop No. 20 to Crop No. 183 conducted during the year under review are detailed in Appendix D.

All the batches of the silk worms came up well except batches No. 53, (Nismo), 86, (Nistari), 90, (Japanese) and 169 (Japanese Nistid) × Mysore (Yellow) affected by pebrine.

60. **Reeling.**—A newly improved country charkha (hand reeling) which is popularly used in the Mysore silk worm rearing villages was brought from Mysore and the services of a skilled reeler were secured from Kollegal during January 1943, and the actual reeling operations were started. The skilled reeler from Kollegal trained up three operatives working in the farm.

A scheme of field demonstrators for training agriculturists in rearing silk worms as a subsidiary occupation was submitted to and sanctioned by Government in the last week of the year under report. The scheme will be put into operation during the year 1943–44.

Visitors.—The silk farm attracted quite a large number of visitors during the year, most of them being agricultural workers.

CHAPTER X.

WORK OF THE DEPARTMENT FOR COTTAGE INDUSTRIES—(*contd.*)

COTTAGE INDUSTRIES OTHER THAN HANDLOOM WEAVING, TANNING AND SERICULTURE.

61. The following cottage industries, in addition to hand weaving, tanning and sericulture, were assisted by the Department by practical demonstration work etc., during the year :—

(1) Cane and Bamboo work.
(2) Lacquer work.
(3) Coir and Fibre Work.
(4) Art-crafts.
(5) Pottery Manufacture.
(6) Boot Lace and file strings making.
(7) Glass Bangle Manufacture.

A brief account of the work done in each case is given below.

62. **Cane and Bamboo Work Demonstration.**—This demonstration was organised at Khanapur in the Belgaum district in March, 1942, where it trained ten students in six months time. It was then transferred to Belgaum in September 1942. The term commenced with ten students on roll who completed their course in February 1943. A fresh batch of ten students was admitted in March 1943.

Expenditure.—The expenditure on and receipts from the demonstration were as detailed in Appendix E.

63. **Lacquer Work Demonstration.**—Two lacquer work demonstrations were conducted during the year :—

(1) One demonstration worked at Pen in the Kolaba district from January 1942 with six students on roll. This batch of students completed one year's course in December 1942 and a fresh batch of students joined in January 1943 which is undergoing training at present.

(2) The second demonstration worked at Belgaum from July 1941. It trained six students by July 1942. A fresh batch of six students was admitted in August 1942. Two of them, however, left the demonstration without completing the course—one in January and the other in February 1943. There were, therefore, four students on roll undergoing training at the close of the year.

Expenditure.—The expenditure on and receipts from the two lacquer work demonstrations were as detailed in Appendix F.

64. **Coir Manufacture and Soft and Hard Hemp Fibre Work.**—

(a) **Coir Manufacture School.**—As reported in last year's report, this school functioned at Ratnagiri with 15 regular and one part-time students for the second term which ended in April 1942. It was then transferred, on the recommendation of the District Rural Development Board, North Kanara, to Aversa in Ankola taluka in the Kanara district where it commenced its work in May 1942, with 15 regular and 3 part-time students on roll. This batch of students completed six months' training in November 1942. In addition, two workers of the Coir Spinning and Weaving Co-operative Society, Honavar, were also trained in all the branches of the industry at the request of the All-India Village Industries Association, Honavar.

As regards the second term, a representation was received from women engaged in coir work to admit them in the school in place of boys as they were anxious to learn the use of improved appliances. The request was granted as a special case and the second term of the school commenced in November 1942 with 15 girls on roll, who were undergoing training at the close of the year.

Expenditure.—The expenditure on and receipts from the school during the year were as detailed in Appendix G.

(b) **Coir Rope and Brush Making Demonstration.**—The demonstration was transferred from Revadanda in Kolaba District where it was working last year, to Akshi in the Alibag taluka of the same district. It admitted ten students in May 1942 who completed their course in October 1942. The demonstration was then transferred to Nagaon in the same taluka in November 1942 where it started work with ten students who are expected to complete the course of training in April 1943.

Expenditure.—The expenditure on and receipts from the demonstration were as detailed in Appendix H.

(c) **Soft and Hard Fibre Extraction Demonstration.**—This demonstration had commenced its work at Dabhadi in Malegaon taluka in Nasik District with ten students on roll in February 1942 as reported last year. This batch completed its work in July 1942; and a fresh batch of ten students was admitted in August 1942. These students completed their course in January 1943. The demonstration was transferred to Kasbe-Sukene in the same District in February 1943, where it was being organised at the close of the year under review.

Expenditure.—The expenditure on and receipts from the demonstration during the year were as detailed in Appendix I.

65. **Scheme for the training of hereditary Art-craft workers.**—During the year under report the ten scholars admitted to the Reay Art Industrial Workshop of the Sir J. J. School of Art, Bombay, in 1940-41, finished their training and returned to their places. The ten admitted in 1941-42 passed in the first year's test and were promoted to the final year course.

A new batch of ten candidates was selected and admitted in June 1942. The number of students selected for the different crafts and the districts from which they hailed are given below :—

Number of students.	Crafts pursued.	District.
3	Engraving	.. Satara, Thana and Nasik.
1	Wood carving	.. North Kanara.
1	Stone carving	.. Ratnagiri.
2	Gold and Silver work	.. Ratnagiri and North Kanara.
1	Carpentry	.. Surat.
1	Shape making	.. Nasik.
1	Carpet weaving	.. Ratnagiri.

These students are expected to complete their training in May 1944.

Since the inception of the scheme in 1938-39 for training hereditary art-crafts workers at Sir J. J. School of Art, Bombay, for a two years' course with scholarships of Rs. 30 per mensem each, 30 artisans have so far been trained in the various crafts. It is gratifying to report that the majority of them are doing well. Nine past scholars have so far been assisted with loan and subsidy under the scheme for grant of loans and subsidies to the artisans trained by this Department. The past trainees are arranging for direct marketing of their goods and some of them are regularly supplying artistic products to the Cottage and Small Scale Industries Depot, Bombay, of this Department. These articles have a good demand in the art metalware section of the Depot.

The Part-time Artist Designer of this Department continued to assist the craftsmen in adopting new patterns and designs in their work and effecting improvements both in the raw materials used and the products turned out.

At Honavar in the Kanara District the attention of the artisans was particularly drawn to the defects in their rose wood inlaid boxes showing tendencies to warp and crack. The necessity of using seasoned wood was successfully impressed on them. The lack in the use of standard fittings for these boxes and folding book racks proved an impediment. The artisans were assisted in securing from Bombay the best type of fittings. The manufacture of such standard fittings by past students of metal work was taken up during the year under review.

Attempts for improving designs and patterns of articles from Kumta were continued and the Sales Depot assisted the marketing of goods by ordering out the finished articles.

Sirsi artisans were given necessary guidance for improvements in their work. One past scholar of this place and others received regular advice from the Part-time Artist Designer and it is expected that artistic goods in variegated colour schemes will be received from this centre also by the Sales Depot in Bombay.

The artisans of Gokak centre were given necessary instructions to enable them to effect improvements in respect of the new orders placed with them by the Sales Depot.

Arrangements were made to obtain for the Surat Sandalwood carvers, sandalwood from the Forest Department to the extent of 2,300 lbs. The wood was to be supplied to them at a concessional rate to take the place of the costly sandalwood from Malabar. Due, however, to transport restrictions it was not possible to remove the sandalwood from Dharwar to Surat before the close of the year under review.

66. **Pottery Manufacture.**—The Pottery Demonstration organised at Manickpur, Bassein, Thana District, continued to work there during the year under review. It trained six students in the study of raw materials, grinding, washing and drying of clays, making of different bodies, manufacturing different wares such as tea pots, milk jugs, sugar basins, chutney sets, bowls, jars, flower vases, etc.

The furnace erected at the centre was filled in with glazed goods and fired during the year and the finished goods were sent to the Cottage and Small Scale Industries Depot, Bombay, of this Department for sale where they received a very good demand.

In addition, the demonstration helped the local leaders in forming the Bassein Co-operative Pottery Glazedware Manufacturers Producing Society Ltd., and imparted instructions to the fourteen trainees deputed by it.

67. In addition to the work described above testing of clays, experiments for the manufacture of decorative wares, etc., were carried out during the year under the supervision and guidance of Mr. C. P. Shah, Pottery Expert, who worked as a consultant to this Department. A brief account of the work done in this connection is given below :—

(1) Experiments conducted on the Patonda and Takerkhed Clays last year were continued and completed this year. Both the clays were found to be similar. A trial was made by mixing the two clays and a suitable body and glaze composition was compounded. Samples manufactured gave very good results.

(2) Samples of white and black clay received from Hubli, a reference to which was made in detail in last year's report on page 50 under sub-para. (3), were further experimented upon during the year under review. The clays by themselves were not workable and yielded no satisfactory results. On mixing these two clays in certain proportions a suitable body composition was compounded. Results were quite satisfactory.

(3) Experiments for producing slipped wares were continued this year and suitable slip-compositions in different colours, viz., white, green, blue were compounded. Samples turned out were attractive and results were good.

(4) Black clay was received from Ahmedabad District for test. A suitable composition of body and glaze was compounded and samples manufactured gave satisfactory results.

(5) Samples of red clay received from Ratnagiri District were under test during the year.

(6) Experiments for the production of artistic vases and tea sets on the lines of Norwegian Art Pottery were continued this year also. Plaster piece moulds of vases, tea pots, milk jug, sugar basins, etc., were made and the clay articles were cast and glazed.

(7) Several colours were made from indigenous raw materials for decoration purposes. Three kinds of decorations were undertaken, viz., coloured glazes, underglaze decoration and non-glaze decoration. After several experiments and trials decorative articles were made and put on sale at the Cottage and Small Scale Industries Depot, Bombay, where they met an increasing demand. These experiments were carried out at the Bombay Potteries and Tiles Ltd., under the supervision and guidance of Mr. C. P. Shah.

Mr. C. P. Shah paid inspection visits to the demonstration off and on during the year and gave technical advice to the staff. He also attended to enquiries received in this office in connection with the pottery industry and drew up a programme

of experimental work for the manufacture of Porcelain Containers for Hydrogen Peroxide.

Expenditure.—The expenditure on and receipts from the Demonstration were as detailed in Appendix J.

68. **Boot Lace, File Strings, Bandings, etc., Manufacture.**—The school was working at Nasik during the year under review. The first batch of ten students admitted to the school completed its course by the end of June 1942. The second batch of ten students finished its training in December 1942. A further batch of ten students joined the school in January 1943 and is undergoing training at present.

The services of one master of this school and some past students were utilised for the manufacture and supply of different types of boot laces required by the Supply Department.

Expenditure.—The expenditure on and receipts from the working of the school were as detailed in Appendix K.

69. **Glass Bangle Manufacture.**—The Glass Chemist did regular touring in the districts where glass furnaces and improved appliances had been installed and all possible assistance was given to the artisans in their work. Two glass furnaces were erected during the year one at Kapadvanj in Kaira District and the other at Bagewadi in Bijapur District for the past trainees under loan-cum-subsidy scheme and they were put in working order. Past trainees of Nasirabad, Tarapur and Gudur were assisted in setting up improved appliances for their work. Assistance was also rendered to the Kajgars Industrial Co-operative Association, Ghodgeri (District Belgaum), in the erection of its new cottage glass furnace.

Samples of Silica sand from Gudur (District Bijapur) and Kapadvanj (District Kaira) were chemically analysed. These sands were also tested in the experimental furnace in various batch compositions to ascertain their utility in the manufacture of glass.

The sand from Gudur was found to contain a high percentage of iron impurity and was unsuitable for the production of good quality coloured glass. It was found that the sand from Kapadvanj was not available in Kaira District proper but it was imported from Idar State in the neighbourhood of the district. This sand was found to be satisfactory in the manufacture of glass and could be used for glass bangle making.

CHAPTER XI.

WORK OF THE DEPARTMENT FOR COTTAGE INDUSTRIES.
(contd.)

MARKETING.

A—Cotton Cloth.

70. **The Government of India grant.**—The Government of India grant received by this Province for the Marketing Scheme for Handloom Products was Rs. 42,058 for the year 1942-43. The total expenditure incurred on the scheme amounted to Rs. 40,942.

71. **Number of District Industrial Co-operative Associations.**—There were in all nine District Industrial Co-operative Associations functioning in the Province at the following centres :—

(1) Ahmednagar, (2) Hubli, (3) Ahmedabad, (4) Sholapur, (5) Yeola, (6) Malegaon, (7) Bagalkot, (8) Belgaum and (9) Dhulia.

72. **Working of the Associations.**—All the Associations were in existence during the year under report and all of them excepting the Ahmedabad Association were engaged on the Supply Department's orders in cotton textiles such as open mesh cloth, Bunting cloth, Handkerchiefs, Towels, Dusters, Grey China Sheeting, Dungry cloth, Dosuti grey, Bandage cloth, etc., valued to the extent of Rs. 22,10,693. Full details of these will be found under paragraph 88 of this Report. A brief account of the progress of these Associations is given below :—

(1) **The North Central Divisional Industrial Co-operative Association Ltd., Ahmednagar.**—This Association progressed very satisfactorily during the year. It concentrated on war orders in cotton textiles in addition to catering for civil needs. During the year the Association also continued to manufacture army blankets, detailed reference to which is made in subsequent paragraphs on "Woollen Industry". The Association effected sales of cloth to the extent of Rs. 5,37,533 and made a gross profit of Rs. 7,693-6-6 during the year under report.

(2) **The Southern Divisional Industrial Co-operative Association Ltd., Hubli.**—This Association was able to make satisfactory progress as will be seen from the figures of sales which rose from Rs. 53,377-8-9 during the last year to Rs. 1,45,295-9-5 during the year under report. It undertook the work of bleaching and dyeing of cotton materials as a special activity. The Association also manufactured army blankets during the year under report.

(3) **The Northern Divisional Industrial Co-operative Association Ltd., Ahmedabad.**—This Association could not accept Supply Department's orders in cotton textiles due to the fact that it was not able to adjust the rates within the prices offered and also to some extent owing to disturbed conditions. The Association concentrated its attention on the supply of goods for civil needs such as sarees, dhotees, towels, etc., and effected sales to the extent of Rs. 76,529-4-9 and earned a gross profit of Rs. 5,703 during the year under report. A new Weavers' Co-operative Society at Barvala was organised by the Association during the year.

(4) **The Sholapur District Industrial Co-operative Association Ltd., Sholapur.**—This Association made excellent progress during the year, the figures of its sales and gross profit being Rs. 11,70,977 and Rs. 43,980 respectively. It accepted a large number of war orders in cotton textiles such as bunting cloth, open mesh cloth, sheeting cloth, dosuti, towels, etc., in addition to supplying for civil needs.

(5) **The Industrial Co-operative Association Ltd., Yeola.**—The Association continued to progress satisfactorily. Its sales amounted to Rs. 4,33,640-8-6 during the year. It executed foreign orders for towels received through the Government Sales Depot, Bombay, in addition to Supply Department's orders.

(6) **The Industrial Co-operative Association Ltd., Malegaon.**—This Association also recorded good progress in its affairs during the year under report. Its sales increased from Rs. 42,536-7-6 during the last year to Rs. 1,01,883-14-6 during the year under report. The Sangamner Branch of the Association progressed satisfactorily. It specialised in the supply of shirting cloth to the Government Sales Depots.

(7) **The Bijapur District Industrial Co-operative Association Ltd., Bagalkot.**—The results of the working of this Association during the year showed a small loss of about Rs. 10. The Association is, however, progressing steadily and is at present concentrating on Supply Department's orders.

(8) & (9) **The Belgaum District Industrial Co-operative Association Ltd., Belgaum, and the Khandesh District Industrial Co-operative Association Ltd., Dhulia.**—Both these Associations progressed steadily during the year under report. Their sales were practically double of those effected during the previous year, as can be seen from Appendix M.

73. **Results of the year's working.**—The statements of membership, capital, turnover and gross profit of each Association for the year 1942–43 are given in Appendices L and M. The total sales effected by all the Associations increased considerably during the year and amounted to Rs. 25,97,490 which are inclusive of war orders in textiles. All the Associations have been taking advantage of the Sales Depots started at Bombay, Surat, Belgaum and Nasik and have effected large sales of their goods through them. From the experience gained so far it is seen that there is a good demand at all centres for the goods of these Associations.

B.—Woollen Cloth and Yarn.

74. **The Government of India Grant.**—The Government of India Grant received by this Province for the scheme for the development of cottage and small scale woollen industries was Rs. 16,698 for 1942–43. The actual expenditure incurred on the scheme during the year under review amounted to Rs. 20,634.

75. **Working of the Scheme.**—The work of the scheme was carried out on the same lines as in the previous years through the agency of the two Industrial Associations organised by this Department at Ahmednagar and Hubli under the scheme for Marketing of Cotton Handloom Products, and the third at Ranibennur.

Arrangements were made through the Hubli Association for the supply of wool and woollen yarn to the wool weavers in the Bijapur District. The Association was not successful in securing finance for this purpose from the banks and, therefore, it approached this Department to move Government to give an interest free loan. Under the recommendation of this Department, the Government of Bombay were pleased to sanction a loan of Rs. 20,000 free of interest and the amount was handed over to the Association to be utilized for the purpose of supplying wool and other raw materials to the weavers of Bijapur and other adjoining areas.

The Konnur Kurubar Wool Industrial Co-operative Producers' Society, Ltd., Konnur, District Dharwar, and the Bijapur District Kurubar Wool Industrial Producers' Co-operative Society, Ltd., Bijapur, approached this Department for necessary finance to purchase wool for supply to the weavers of Konnur in Dharwar District and Babanagar and Kalamadi in Bijapur District. This Department directed the Hubli Association to give Rs. 500 and Rs. 2,000 interest free loans from the above referred to loan of Rs. 20,000 to the aforesaid two societies respectively. These two societies had agreed to work as producing centres of the Hubli Association.

76. **Working of the District Industrial Associations and Producers' Societies.**—

(*i*) **The North Central Divisional Industrial Co-operative Association Ltd., Ahmednagar.**—The Association carried out satisfactorily the manufacture of army blankets and handspun woollen yarn, special mention of which is made in the subsequent paragraphs.

(*ii*) **The Southern Divisional Industrial Co-operative Association Ltd., Hubli.**—This Association carried out the work of manufacturing army blankets, handspun woollen yarn, rugs and fancy fine yarn kambals and fine woollen shawls. This work was mainly done through the agency of its branch at Bijapur and the two Producers' Co-operative Societies in Dharwar and one in Bijapur Districts.

(*iii*) **The Kurubar Wool Industry Development Co-operative Association Ltd., Ranibennur, District Dharwar.**—The main activity of this Association was to weave army blankets and spin handspun woollen yarn. During the year under report, the Association also manufactured coloured pattern kambals for civilian needs and these were very popular in taluka towns and villages.

(*iv*) **The Konnur Kurubar Wool Industrial Co-operative Producers' Society, Ltd., District Dharwar, and the Bijapur District Kurubar Wool Industrial Co-operative Producers' Society Ltd., District Bijapur,** agreed to work as producing centres of the Southern Divisional Industrial Co-operative Association Ltd., Hubli.

77. **Handspun Woollen Yarn.**—The Associations at Ahmednagar, Hubli and Ranibennur secured orders for handspun woollen yarn from the Jail Department of the Province. The supplies of yarn made by these Associations during the year under report were as under :—

Name of the Association.	Quantity (lbs.)	Approximate value.	Jails to which supplied.
		Rs.	
1. Ahmednagar Association	21,270	18,890	Visapur, Yeravda, Sabarmati and Nasik Jails.
2. Hubli Association	6,500	5,700	Central Prison, Belgaum.
3. Ranibennur	1,500	1,320	Borstal School, Dharwar.
Total ..	29,270	25,910	

78. **Wool opening and Carding Machine.**—With the co-operation of the Village Industries Experimental Workshop, Poona, hand-driven wool opening and carding machines were constructed and manufactured at the Poona Workshop. The machines are now kept running in the villages of Vambori and Miri in the Ahmednagar District and at Bijapur in the Bijapur District. The wool is first treated in the "opening" or "willowing" machine and subsequently carded in the carding machine. Previous to the introduction of this machine, carding was done by the ordinary handbow by the "Pinjaris" or hereditary wool carders. This was not being done efficiently as the dust and other tiny vegetable particles could not be properly separated by the bow carding process. An arrangement, however, has been made in the machine by which the dust and tiny vegetable particles are separated from the carded wool. These machines are simple in construction and easy to handle and repair. The production by the carding machine is also greater than that by bow carding process and the work done is also much more efficient. On account of war, some of the parts of the machine such as ball bearing etc., could not be procured and, therefore, more machines could not be installed though there was a demand for them from two other centres.

These machines are suitable for the treatment of short staple wool only. Attempts are being made to construct suitable machines for the treatment of long staple and soft wool.

79. **Purchases and Sales.**—The total purchases and sales of raw materials and finished products effected by the different Associations and the Producers' Societies as reported by them are as under :—

Name of the Association or Society.	Purchases.		
	Raw materials.	Finished goods.	Total.
	Approximate value.	Approximate value.	
	Rs. a. p.	Rs. a. p.	Rs. a. p.
1. Ahmednagar Association	20,886 6 0	1,46,087 15 9	1,66,974 5 9
2. Hubli Association	3,277 2 0	29,904 13 0	33,181 15 0
3. Ranibennur Association	....	....	9,589 6 0
4. Konnur Kurubar Society	....	....	6,189 9 0
5. Bijapur Kurubar Society	....	....	597 6 3
		Grand Total ..	2,16,532 10 0

Name of the Association or Society.	Sales.		
	Raw materials.	Finished goods.	Total.
	Approximate value.	Approximate value.	
	Rs. a. p.	Rs. a. p.	Rs. a. p.
1. Ahmednagar Association	23,481 10 0	2,03,166 7 9	2,26,648 1 9
2. Hubli Association	3,694 5 0	34,650 9 3	38,344 14 3
3. Ranibennur Association	....	....	14,591 1 9
4. Konnur Kurubar Society	....	....	734 2 3
5. Bijapur Kurubar Society	....	....	6,952 8 9
		Grand Total ..	2,87,270 12 9

Note.—The Konnur Kurubar Society started working from November 1942 and hence the figures given above represent its outturn for five months only.

80. **Assistance to Indian States.**—The services of the Wool Expert of this Department were spared for giving advice to the Sangli State authorities regarding the manufacture of blankets. As a result of this a centre at Shrinatti was started by the State and the blankets which were manufactured at that centre were despatched to Hubli for finishing and further disposal.

81. **Assistance to Merchants trading in woollen goods.**—Tenders for the supply of Kambals to the Railways and other Departments were received in this office. The Wool Expert helped a merchant at Bijapur in selecting a suitable sample and filling up the tender form and quoting the rate. This tender was passed and kambals worth about Rs. 25,000 were supplied by him. The Wool Expert also helped another merchant of Bijapur to start a wool weaving centre with his own capital.

(C) Sales Depots.

(1) BOMBAY DEPOT.

82. During the third year of its existence, the Depot showed an all-round expansion of its activities. Its working capital was increased during the year by Rs. 2,50,000 to Rs. 2,70,000. The Depot continued to be housed on the ground floor of the Great Social Building on Pherozshah Mehta Road.

The Depot as usual received goods on consignment basis from the District Industrial Co-operative Associations, peripatetic weaving schools, lacquer-work demonstration, coir demonstration, the Government Leather Working School, the Sisal Fibre Institute (Ahmednagar), and the Honawar and Kumta Sandalwood Producers' Co-operative Associations. It also marketed goods of individual artisans and small-scale producers on a commission basis.

Total sales and deliveries during 1942–43 amounted to Rs. 1,95,912-13-11 against Rs. 67,540-12-10 in the previous year. The stock on hand on 31st March 1943 was worth Rs. 37,374-2-9. The gross profit during the year was Rs. 8,059-8-0.

During the year the Depot received substantial orders from Australia and Africa, the amounts involved being Rs. 4,25,000 and Rs. 36,000 respectively. The Australian orders were for towels and tea-tray cloth. Those from Africa related to handwoven check (Susi cloth) and handwoven coarse cloth. Rs. 27,000 worth of Australian orders only could be executed by the end of March 1943. It is hoped to execute the African and the balance of the Australian orders very early.

A feature of the year was the introduction by the Depot of many artistic designs and patterns, more particularly in copper and silver articles such as dishes, table-lamps, flower vases, etc.

(2) SURAT SALES DEPOT.

83. This Depot is situated in the main business locality of Surat and commenced work on 17th March 1942. It keeps the goods of the District Industrial Associations and artisans for sale in the Depot on a consignment basis. In the case of artisans too poor to keep their goods on consignment basis, outright purchases are made. The more important goods stocked here are sandal-wood boxes, handloom fabrics and Jari goods. During the year the Depot received orders from Ceylon and Africa. These could not, however, be executed due to transport difficulties.

The total sales of the Depot during the year amounted to Rs. 24,690. The working showed a gross profit of Rs. 2,178. The Depot was entrusted with miscellaneous purchases on behalf of the Civil Pioneer Force, Surat. The Commandant very much appreciated the services of the Depot in this connection.

(3) BELGAUM SALES DEPOT.

84. This Depot started work in May 1942 with a capital of Rs. 6,500 sanctioned by the Department. It stocks the products of small-scale and cottage industries of the district. Goods from the different District Industrial Associations are also accepted on a consignment basis. The total sales during the year amounted to Rs. 33,159. The gross profit was Rs. 3,637-0-0.

(4) NASIK SALES DEPOT.

85. This Depot could only be opened on 28th March 1943, due to the difficulties in getting suitable premises. It has enlisted the co-operation of the District Industrial Associations and individual artisans and at the time of writing of the Report is doing very well.

CHAPTER XII.

WORK OF THE DEPARTMENT FOR COTTAGE INDUSTRIES (contd.)

SCHEME FOR THE USE OF THE COTTAGE AND SMALL-SCALE INDUSTRIES FOR THE PRODUCTION OF WAR SUPPLIES.

(1) Handloom Cotton Textiles.

86. During the year under report, Government sanctioned the opening of Government Manufacturing Centres in different districts in addition to the Centres already organised by the District Industrial Co-operative Associations subsidised by Government in order to give further help to the handloom weavers in the execution of war orders. Accordingly, five Government Centres were opened at Chadchan, Gokak, Sangamner, Savda and Parola, and placed in charge of experienced Production Managers, who worked under the supervision of the Textile Expert of this Department. These Centres were organised to supplement the production of the Industrial Co-operative Associations described in the previous Chapter.

87. During the year the Government increased the amount placed at my disposal to make purchases of yarn and chemicals required by the Associations and Government centres for Supply Department's work from Rs. 4,00,000 to Rs. 10,00,000. The Associations and the Government Cloth Supply Centres were supplied raw materials for manufacturing fabrics on account of the Supply Department orders to the extent of Rs. 10,45,103-9-9 and Rs. 1,11,176-6-9 respectively.

The orders secured from the Supply Department were distributed to the Industrial Co-operative Associations and official centres for compliance according to their capacity.

88. During the year under report orders for the various types of cloth worth about Rs. 17,88,693 were received from the Supply Department in addition to the previous year's orders of 4,22,000 and the materials of the total value of Rs. 9,84,744-10-3 were completed as shown in the subjoined tables :—

Name of cloth.	Total order. Quantity.		Total order. Value.			Order completed. Quantity.		Order completed. Value.		
	Yds.		Rs.	a.	p.	Yds.		Rs.	a.	p.
1. Bunting Cloth in various colours ..	5,64,743		3,11,966	4	6	3,18,989		1,64,942	9	9
2. Open Mesh Cloth ..	6,64,590¼		1,47,336	1	0	6,64,590¼		1,47,336	1	0
3. Bunting Flags ..	13,400	Nos.	4,994	8	6	13,400	Nos.	4,994	8	6
4. Huckaback Towels ..	7,00,000	,,	4,14,062	8	0	3,85,000	,,	2,24,648	7	0
5. Dusters	1,62,200	,,	43,089	0	0	1,03,400	,,	26,792	0	0
6. Grey China Sheeting ..	2,20,000	Yds.	77,343	0	0	2,00,000	Yds.	70,650	4	8
7. Handkerchiefs ..	1,00,000	Nos.	15,625	0	0	70,000	Nos.	10,937	8	0
8. Dungry Cloth ..	1,66,900	Yds.	68,667	12	4	87,200	Yds.	37,705	3	4
9. Dosuti Grey ..	20,00,000	,,	8,80,208	5	4	7,40,000	,,	2,96,738	0	0
10. Bandage Cloth ..	10,00,000	,,	2,47,400	0	0	....		....		
			22,10,692	7	8			9,84,744	10	3

(2) Handloom—Wool Blankets.

89. During the year under report the main activity of the Co-operative Associations at Ahmednagar, Hubli and Ranibennur and the two aided Producers' Societies at Konnur in Dharwar District and one in Bijapur District was to manufacture and supply handloom blankets to the War Supply Department of the Government of India and Departments of the Government of Bombay. The supplies of blankets made by the Associations were as under :—

Name of the Association.	Quantity supplied.	Value approximate.	Parties to whom supplies made.
	Blankets.	Rs.	
Ahmednagar Association ..	21,700	1,47,200	Supply Department, Government of India.
Do.	5,555	44,353	J. J. Hospital, Bombay, and other Hospitals and the A. R. P. organizations at Bombay and Poona.
Hubli Association	1,202	8,239	Supply Department, Government of India.
Do.	2,966	20,700	A. R. P. organizations at Bombay and Poona and District Civil Hospitals and District Jails.
Do.	1,000	2,500	Superintendent, Government Printing and Stationery, Bombay.
Total ..	32,423	2,22,992	

The weavers and spinners of villages spread over the different districts of the Province were fully engaged in the manufacture of these blankets. Approximately, 2,52,000 lbs. of wool were purchased in the villages by the different Associations and Societies and individual weavers. The Associations and the Societies made arrangements to supply wool to the poor weavers who did not possess the necessary capital for purchasing and stocking the wool in the sheering season. The spinners, weavers and their families got regular work on account of this order. The total amount paid to them by way of wages was approximately Rs. 65,000. The village sheep breeders got about Rs. 1,25,700 and thus a total sum of Rs. 1,90,700 went into the pockets of the village people engaged in the wool industry during the year under report on account of this order. The work of carding, spinning and weaving of the blankets was carried on in the villages of the districts of Ahmednagar, Sholapur, Belgaum, Dharwar, and Bijapur. Particularly in the last mentioned district where famine was raging provision of work to the wool weavers and spinners gave a helping hand to them.

(3) Miscellaneous.

90. Since the outbreak of war, the Supply Department consulted this Department from time to time in regard to various items of military requirements which could be dealt with by cottage and small-scale industries. With a view, however, to make use of the small-scale industry on an expanded scale on some definite lines, a scheme was sanctioned to rope in small-scale industries and get military requirements of certain articles manufactured by them through this Department's agency. During the

year under review this Department accepted orders from the Supply Department for various items as detailed below :—

Timber Articles.—34,930 Pickaxe 4½ lb. helves and 31,000 Pickaxe 6½ lb. helves (Rs. 61,564), 6,500 Awl handles, small and large (Rs. 911), 13,400 Hammer handles of different sizes (Rs. 1,895), 2,500 Folding charpoys (Rs. 43,500), 4001 chisel handles of different sizes (Rs. 1,895), 2,500 Folding charpoys (Rs. 43,500), 4,001 Chisel handles of different sizes (Rs. 607), 25,000 Shovel G. S. M. K. III helves (Rs. 14,063), 3,500 Axes hand helves (Rs. 1,203), 176 Bullock carts (Rs. 66,880), 1 lakh of Tent I. P. small pins (Rs. 1,725).

Barring the charpoys, a few pickaxe helves, shovel helves, bullock carts and Tent I. P. pins, the other orders were executed before the close of the year under review. Delivery of the remaining items is expected to be given in the early part of the next financial year.

(2) **Metal Articles.**—Orders were received for 10,000 Table knives (Rs. 7,916), 3,000 Cook's knives (Rs. 4,125), 10,000 Clasp knives (Rs. 17,812), 2,50,000 Faucet bodies and caps (Rs. 1,18,489), 5 lakhs Tent Iron Pins (Rs. 66,250), and 28 gross Buttons-pressed-cloth-to-wood (Rs. 1,205).

Of these the cutlery goods could not be supplied as all samples manufactured for test before bulk supply by different small-scale workers were rejected by the Inspection Department. Since the small-scale workers were not able to manufacture cutlery-ware to the required specification and standard of raw material, the orders were given up by this Department.

The order for Faucet bodies and caps was nearing completion by the end of the year, that for buttons-pressed-cloth-to-wood was completed and the manufacture and supply in instalments of Tent Iron pins by different parties was in progress at the end of the year.

(3) **Leather Articles.**—An order for 5,000 pairs of Gloves M. T. 8½″ and 5,000 pairs of 9″ (Rs. 30,938) was received and over 7,000 pairs were delivered by the end of the year under review.

On a requisition from the Officer Commanding, Bombay Technical Training School Centre, 1,000 pairs of chappals of frontier patterns, worth Rs. 3,750, were got manufactured at Poona and supplied.

(4) **Miscellaneous Stores.**—The order for 50,000 pairs of laces knee cotton light khaki received in the last week of March 1942 before the inauguration of the scheme, was completed during the year under report.

91. The total value of the miscellaneous orders accepted during the year was Rs. 3,68,934.

CHAPTER XIII.

WORK FOR COTTAGE INDUSTRIES—(contd.).

GRANTS-IN-AID TO PRIVATE BODIES FOR THE DEVELOPMENT OF COTTAGE INDUSTRIES.

92. During the year grants-in-aid were made by Government to the All-India Village Industries Association and the Sisal Fibre Institute, Ahmednagar. A brief review of the work done by these bodies is given below :

93. (1) **The All-India Village Industries Association.**—The amounts of grants sanctioned by Government to this Association for different schemes during

the year and the amounts actually spent by the Association are shown below :—

Scheme.	Expenditure sanctioned by Government.	Amount actually spent by the Association.
	Rs. a. p.	Rs. a. p.
1. Training in Coir Industry	3,000 0 0	2,997 6 1
2. Training in Button-making industry at Honavar and Hubli ..	1,050 0 0	994 11 3
3. Training in manufacture of articles from Horns	500 0 0	489 7 2
4. Slate Pencil Industry at Hubli	1,000 0 0	1,000 0 0
5. Development of handmade paper industry at Erandol and Junnar.	6,993 0 0	5,484 13 0
6. Handmade Paper Research Centre at Poona	12,700 0 0	12,688 8 3
7. Publications	500 0 0	500 0 0
8. Cost of Administration	2,500 0 0	1,892 9 1
Total ..	28,243 0 0	26,047 6 10

94. **Training in Coir Industry.**—Three types of training are provided at Honavar viz., spinning, rope making and weaving of mats. The number of students taught was 48 in spinning and 3 in weaving. Arrangements were made to get 2 men trained in dyeing and weaving in the Coir School conducted by the Department of Industries.

95. **Training in Button-making at Honavar.**—The number of persons trained was 22, out of whom 9 were from outside the district. As Tali palm seeds were not available, other raw materials were used such as bones, horns, coconut shells, etc. Two new centres were opened in surrounding villages—Kasarkod and Haldipur.

96. **Training in manufacture of articles from horns.**—Hairpins and combs are among the principal articles manufactured out of horns at the centre. There has been very great demand for these articles. 29 persons, both men and women underwent training, out of whom 13 were from outside the district. This industry is becoming very popular.

It may be noted here that there are two co-operative societies for these trained artisans, one for the Coir Industry and the other for button-making and the manufacture of articles from horns.

97. **Slate Pencil Industry at Hubli.**—On account of various difficulties no special progress could be made at the centre. Various tests and experiments were conducted with a view to increasing the strength and hardness of the manufactured articles. There has been very recently further improvement in quality.

98. **Development of hand-made paper industry at Junnar and Erandol.**—In December 1941, a proposal for installing a hand beater and a calender both at Junnar and Erandol was forwarded to Government. Government sanctioned the proposal in March 1942, permitting the scheme to be carried out during the year 1942-43. After the original proposal was forwarded to Government in December, 1941, it was decided by the All-India Village Industries Association to permit the use of electric or other motive power for making paper pulp.

During the year, in accordance with a scheme previously approved by Government a demonstrator was appointed to supervise the work of manufacture of hand-made paper at Junnar and Erandol and especially to improve the quality of blotting paper

to be supplied to Government. An order for 700 reams of blotting paper was received from Government and it is a matter for satisfaction to note that the quality has much improved and that 700 reams were got manufactured at Erandol and Junnar under the supervision of the demonstrator. One beater, one calender 2 vats, 4 lifting frames, cloth, colour, etc., were supplied to the centres at Junnar and Erandol. The other part of the scheme, namely, that of supplying paper pulp from Poona and of demonstrating the manufacture of various types of paper could not be taken in hand owing to various difficulties such as the delay in obtaining the requisite machinery, lack of transport facilities and scarcity of raw materials.

99. **Hand-made Paper Research Centre, Poona.**—The centre made considerable progress during the year in the matter of training, production and research. A regular training class was opened which was attended by 17 students from the various parts of the Province. Systematic training was arranged, both theoretical and practical, and an examination was held at the close of the period of training. Facilities for short courses of training were also afforded at the centre. There was an improvement in the output of the centre and new varieties such as grey absorbent papers were turned out in the year. The centre also undertook the work of calendering the blotting paper from Erandol and Junnar for being supplied to Government.

Various experiments were conducted with different raw materials and methods particularly with regard to drawing paper. A research student deputed by Government was attached to the laboratory of the centre. Inquiries about quality and requests for analyses received from various quarters had to be attended to by the centre. The expenditure incurred on this centre during the year was Rs. 12,688-8-3.

100. **Publications.**—A grant of Rs. 500 was sanctioned for the preparation and printing of a brochure on "Rice". This was prepared in Marathi on the basis of the All-India Village Industries Association Publication on the subject and was published during the year, the expenditure incurred being Rs. 353. A translation in Kanarese was also published subsequently, the expenditure on this being Rs. 147.

101. **Cost of Administration.**—The total amount sanctioned was Rs. 2,500. As in the previous year, this was used for meeting the expenditure incurred at Honavar and at the Association's office in Bombay. The expenditure at Honavar included the honorarium of Rs. 900 paid to Mr. S. K. Kallapur, B.A., LL.B., who is in charge of the centre. The other expenses at the centre amounted to Rs. 395-4-7. A sum of Rs. 597-4-6 was spent by way of clerical charges, postage, stationery, etc. at the Association's office in Bombay.

(II) **Sisal Fibre Institute, Ahmednagar.**—This Institute run by the American Marathi Mission, Ahmednagar, was given a recurring grant of Rs. 2,630 during the year under review on the condition that it admits each term at least fifteen apprentices to be selected by a Selection Committee comprising the Collector and Chairman, District Rural Development Board, Ahmednagar, the Director, Sisal Fibre Institute and a representative of this Department. The Institute provides training in sandal making, *bondrie* or coarse bag making, carpet and door mat weaving, rope making, making of fancy braided articles, and brushes, etc. from sisal or aloe fibres.

The session of the Institute is divided into two terms of five months each. The first term commences from 15th June and ends on 14th November and the second runs from 15th November to 15th April.

Students from all districts are eligible for admission, preference, however, being given to candidates from Ahmednagar District. Scholarships of Rs. 8 per month are given to the students undergoing training in the Institute. Hostel facilities are also provided for the students.

During the year under review 34 apprentices were enrolled during the two terms, of whom 19 completed the full course of instruction. In addition, the Institute admitted 21 students for a short course of three months. Of these 21 casual students 18 passed. Four others also received training. Of the 34 apprentices mentioned above 28 were from Ahmednagar District whereas 6 hailed from other districts.

During the year under review, the Institute, in addition to the manufacture of usual products, manufactured and supplied 102 camouflage nets of 35′ × 17′ as well as 44 nets of 35′ × 24′ for military requirements. The Institute also made some improvements in the spinning machine and designed the hand power spinning and twisting machine for the manufacture of rope cable 3″ in circumference and 3,000 feet in length required for military purposes. The Institute further took up the work of manufacturing hammocks of sisal nets $3\frac{1}{2}'$ × 8′ in size supported at two ends by bamboos which offer good commercial possibilities.

CHAPTER XIV.

WORK OF THE DEPARTMENT FOR COTTAGE INDUSTRIES (contd.)

WORK OF THE DISTRICT INDUSTRIAL OFFICERS.

103. Three District Industrial Officers with headquarters at Belgaum, Nasik and Surat respectively were appointed during 1941-42. These officers have to cover the entire field of the departmental work in the districts in which their head-quarters are located.

104. A brief account of the work done by the three District Industrial Officers during the year given in the subsequent paragraphs shows that very valuable work can be done in the districts for their industrial development. The experiment of having District Industrial Officers has proved to be entirely successful and it is hoped that in due course there will be a District Industrial Officer in each district of the Province.

District Industrial Officer, Belgaum.

105. (*a*) **Departmental Institutions in the District.**—General periodical supervision of the following Departmental Institutions was made during the year under review :—

(*i*) Dyeing Demonstration, Khasbag, Belgaum.

(*ii*) Cane and Bamboo Demonstration, Belgaum and at Khanapur.

(*iii*) Lacquer work Demonstration, Belgaum.

(*iv*) Weaving Demonstration, Gokak.

(*v*) Weaving Demonstration, Bailhongal.

(*vi*) Government Handloom Cloth Supply Centre, Gokak.

(*vii*) Weights and Measures Office, Gokak Division.

(*viii*) Weights and Measures Office, Athni Division.

(*ix*) Weights and Measures Office, Belgaum Division.

(*b*) **District Sales Depot of Cottage and Small Scale Industries.**—A Sales Depôt for marketing the products of cottage and small scale industries has been organised and the Depot started its work from May 1942. Good progress has been achieved during the year and the daily average sales range from Rs. 200 to Rs. 300. The weavers and the other industrial institutions of the District were greatly benefited from this Depot. The artisans to whom loans have been granted by the Department are given regular orders and adequate work. This has enabled the artisans to find a ready market for their goods.

(*c*) **Loans and Subsidies.**—Loans granted during the year to *bona fide* artisans in the District, under the Scheme of Loans and Subsidies to Artisans, were distributed to the respective artisans in the shape of raw materials and tools and equipments required by them. A close touch with the loanees was maintained and assistance was given to them whenever needed. Practically all the instalments in the District have been recovered in time. These loanees have been attached to the District Sales Depot, Belgaum, for marketing their articles. They have been given from time to time new designs and patterns to manufacture their goods as per needs and requirements of the market.

(*d*) **State-Aid to Educated Unemployed.**—A loan of Rs. 1,000 each was disbursed to two people, one of Belgaum, for his confectionery industry, and the other of Sirsi, in Kanara District, for his carpentry and smithy work. They were provided with raw materials and tools and implements.

(*e*) **Nur Imdad Oil Lamps.**—During the year under report these vegetable oil lamps were distributed to the villagers of Belgaum District, 250 lamps in the beginning, and 700 at a second time, with the help of the Revenue Staff. Data about the serviceability of the lamps was collected from the villages and consolidated reports have been submitted to Government through the Collector of the District and through the Director of Industries, Bombay.

(*f*) **Haskel Oil Ghany.**—These ghanies are now working at Athni, Kudchi, Belgaum, Nandgad and Gokak, quite satisfactorily. The centres were frequently visited and the telis were assisted in marketing their products. Instalments from these parties were also collected. Much publicity was given to this improved oil ghany.

(*g*) **Commercial Directory of the District.**—The Department has thought it necessary to compile a Commercial Directory of the Province, and in this connection, statistical data of the traders, manufacturers, and cottage workers was collected in the District. Reports about the state of cottage industries in the District were submitted to the Director of Industries, Bombay, from time to time. The work will be continued during the next year also.

(*h*) **Institutions which have been given grants.**—Visits were paid to the following institutions of this District, to which grants have been made available by the Department of Industries :—

(*a*) Messrs. Shevade Camera Works, Belgaum.

(*b*) Messrs. the Khajgars' Industrial Co-operative Association, Limited, Ghodgeri, taluka Gokak.

(*c*) The District Industrial Co-operative Association, Limited, Belgaum.

The Karnatak Industrial and Plywood Co., Limited, at Supa in Kanara District was also visited two or three times during the year for submitting reports to the Director of Industries on its working. General inspection of the above institutions was made during the year under review.

(*i*) **Trade Enquiries.**—Trade enquiries of the District were replied to. Information about the training given in the different institutions of the Department of Industries was given to enquirers.

(*j*) **War Supply Work.**—Almost all the Small Scale Mechanical Workshops and timber factories and many individual artisans of Belgaum, Dharwar and Hubli were contacted with the office of the Director of Industries, Bombay, for placing orders of the Supply Department. A general check over these workshops and artisans was kept during the year.

(*k*) **Artisans' Societies.**—Artisans' Societies in this District were frequently visited. Two more Societies of weavers, one at Yamkanmardi and another at Chikodi were organised during the year under report. They have been duly registered by the Registrar of Co-operative Societies and the Director of Rural Development, Poona. Another new weavers' society at Khasbag, Belgaum, will shortly be organised. The promoters of this Society at Khasbag are the loanees of the Department of Industries, to whom loans and subsidies have been granted by the Department. The share capital has been collected now and the Society's papers for registration will be forwarded to the Assistant Registrar, Co-operative Societies, Belgaum Division, Belgaum, shortly.

The Societies already in existence in this District have been linked with the District Sales Depot of the Department at Belgaum, for marketing their products.

Efforts were made to revive some of the old societies of the District which were not working. The Kittur Weavers' Society which was not working, due to the mismanagement of the Managing Committee, was visited; dues have now been collected from the members to enable recognition of the Society.

(*l*) **Various schemes of Training in the Department.**—Some hereditary bangle makers were recommended from this District to undergo training in the improved type of bangle-making in the classes of the Department, attached to the Village Industries Experimental Workshop, Poona.

Two students have been sent to the Departmental Pottery Demonstration at Manickpur, Bassein Road, Bombay.

Teli boys have been deputed to undergo training in the Village Industries Experimental Workshop, Poona.

Three hereditary tanners from this District are undergoing training at the Government Tanning Institute, Bandra, Bombay.

(*m*) **Paper Industry.**—There is a handmade paper section of the Canara Paper and Pulp Company at Khanapur of this District, which is mainly preparing gin-washers and handmade paper on a small scale. Technical assistance and co-operation were given to this factory whenever necessary.

(*n*) **Model Villages.**—There are certain villages in this District which have been notified by the Collector of Belgaum as Model Villages. Some of these villages were visited. Some propaganda was carried out with a view to the development of village industries in these villages.

(*o*) **Tour during the year.**—Nearly all the important villages and towns in the Belgaum District were visited during the year under report. During the tour, much work was done in the interior to organise co-operative societies, to take the census of manufacturers, artisans and traders, etc. Industrial Institutions in the District were visited to keep close contact with them.

106. **The District Industrial Officer, Nasik.**

(*a*) **Directory and Surveys.**—During the year work of the Industrial and Commercial Directory was initiated and finished in eight out of twelve talukas of the District. A general survey of all industries was conducted and a census of artisans in bigger villages throughout the District was completed.

(*b*) A special survey of Backward Areas of Nasik and West Khandesh Districts was undertaken in January 1943 with reference to the proposals of Backward Class Committee, Bombay Province. The survey was conducted under the instructions and guidance of the Director of Industries, with a view to devise measures for the betterment of the Backward Classes of the two districts. A full report was submitted to the Director of Industries after the survey was completed in February 1943.

(c) **Industrial Training.**—The undermentioned four peripatetic parties worked in the District :—

(1) Boot-lace School, Nasik ;

(2) Hard and Soft Fibre Demonstration ;

(3) Weaving School, Yeola ;

(4) Tanning Demonstration.

Their work was supervised by the District Industrial Officer.

Arrangements were made by the District Industrial Officer for sending eight candidates from this District for training at the various Departmental schools. One candidate was sent to the Sisal Fibre Institute, Ahmednagar. Eleven oilmen took advantage of the oil-ghani class opened at the Village Industries Experimental Workshop, Poona.

(*d*) **Aid under Subsidy-cum-loan Scheme.**—Two candidates of the Fibre Demonstration and two of the Boot-lace School and one candidate who completed the course of Arts and Crafts at Bombay received aids under Subsidy-cum-loan Scheme.

The three chamar trainees who had received aid during the previous year are doing their business profitably and repaying regular instalments of the loan. The District Industrial Officer maintained contact with these artisans and helped them when necessary.

(*e*) **Aid to Educated Unemployed Youths.**—Two persons were granted Rs. 600 each under the scheme. One of them is an artist and a shape maker on metals. The other is a manufacturer of chalk sticks, crayons and pestles. The District Industrial Officer kept in touch with these parties.

(*f*) **Grants to Cottage Industries by District Rural Development Board, Nasik.**—Rs. 500 were granted for two sheds—one at Bhagur and the other at Satana.

Rs. 150 were granted as a short term loan to ten tanners at Bhagur and Rs. 240 to twelve tanners at Vani to enable them to attend the Tanning Demonstration.

Rs. 500 were granted to encourage the wool weaving industry at Naigaon. The sum was deposited with the Naigaon Dhangars' Society which purchased wool and supplied it to its members on piece work basis.

Rs. 1,500 were sanctioned for a training scheme of Backward Area candidates. The scheme is intended for introducing suitable industries in the Backward Area of the District. 13 candidates have been admitted to the scheme who are undergoing training at 4 Demonstration Schools of the Department.

These grants were made on the recommendation of the District Industrial Officer by the District Rural Development Board, Nasik.

(*g*) **Co-operative Societies.**—(i) The two Industrial Co-operative Associations at Yeola and Malegaon organised for marketing handloom products successfully executed large orders of the Supply Department throughout the year.

Investigations were proceeded with in co-operation with the Yeola Association to co-ordinate weaving centres in the District other than Malegaon and Yeola to form a separate production unit. There are over 200 looms at Sinnar, 110 at Nasik, 40 at Niphad, 100 at Vinchur, 75 at Chandor, 50 at Satana and 30 at Nampur. For this purpose the Yeola Association secured sanction from the Registrar, Co-operative Societies, to extend its field of operation all over the District except the Malegaon taluka. It was thought possible to connect Sinnar, Nasik, Niphad and Chandor to the Yeola Association. A trial beginning has been made at Chandor with 25 looms. The looms have been provided with work on similar lines as at Yeola. From the experience of this trial the activity will be extended to other centres.

(ii) Tanning Demonstrations were located at Bhagur from February to September, 1942. The local chamars realised the benefits of the improved methods and appliances. They were persuaded to form a Producers' Co-operative Society. With 18 promoters and Rs. 598 capital the society was registered in July, 1942, and held its first meeting on 11th August, 1942. Now the Society has 21 members and a capital of Rs. 591. The Bombay Provincial Co-operative Bank has agreed to advance a loan up to Rs. 4,000 to the Society for its work. The Society, however, could not begin its work in a proper way as the tanners have not secured a plot and a shed. The promoters have selected a site for the shed and applied to the Collector for a grant. It has been decided to grant the plot on lease of 30 years to the Society and the final orders are awaited. The plan of the shed and the estimate are ready. The promoters have resolved to contribute Rs. 500 towards the shed. Rs. 250 are granted by the District Rural Development Board, Nasik. The name of the Society is styled as "Bhagur Co-operative Leather Works". The vicinity of markets like Deolali and Nasik is favourable for leather work business.

(iii) **Yeola Oilmen's Society.**—The erection of the Haskel oil ghanies in the District created interest amongst oilmen for the development of their trade. Yeola is a good centre for promoting the village oil industry, where about 45 ghanies are working, and the trade is not affected by imported mill-made oil. The main reason is that Yeola and the villages consume Karadi oil which is not manufactured by the mills and therefore Karadi pressing in the region has thrived. The superior working of the Haskel ghany is understood by the local telies who are consequently ready to form a co-operative organisation. 18 promoters have collected Rs. 817 initially. For 20 members ordinarily a working capital of about Rs. 10,000 is necessary. With a small sum of Rs. 1,000, though it may seem inadequate, a beginning is proposed to be made. With an approved arrangement the bank-loan of about Rs. 8,000 can be utilised. The proposal has been forwarded for registration and the members will get the advantage of joint purchases and sales.

(*h*) **District Sales Depot, Nasik.**—The Depot was opened before the close of the year. The Depot maintained a satisfactory average of sales and this is mainly due to the co-operation being received from the Industrial Co-operative Associations in the District, individual artisans and trainees of the Department. Production is being organised in a systematic way according to public taste.

(*i*) **Organisation of Artisans.**—A wool weaver trained in a Departmental demonstration was provided with capital to manufacture rugs and blankets. His articles proved to have a ready sale at the Depot. Subsequently he trained his two brothers and doubled the rate of production. Thus interest in the use of fly-shuttle looms and in the manufacture of good saleable articles is being developed on account of this assistance.

A Gavali (milk-man) doing dairy business on a small scale wanted to start an oil ghani side by side. The advantages of the Haskel Oil Ghani were explained. He bought and installed one. The working has proved profitable to him as (1) he gets his own oil cake as a reliable cattle food, (2) his stud bull lying idle so far could be profitably employed on the ghani, (3) the oil could be sold along with milk to the clients and (4) no extra expenditure is incurred for employment of any extra hand. The surplus oil can be sold at the District Sales Depot as pure ghani oil has large demand. The instance has created interest amongst oilmen as it demonstrates the useful nature of the industry.

The trades of carpentry, pottery and tailoring were under organisation. These have immediate and large scope at the Sales Depot—(*a*) carpentry for production of utility designs of handy furniture, (*b*) pottery for providing all sorts of containers and (*c*) tailoring to cut modern clothing and prepare domestic sets. Selected artisans were entrusted with the work for the Sales Depot. The three departmental chamar trainees are selling leather goods and one arts and crafts trainee supplies art-work on metal through the Department's Sales Depot at Nasik.

(*j*) **Haskel Ghanies.**—Seven Haskel oil ghanies have been erected in the District which are working satisfactorily. The District Industrial Officer maintained contact with the telis concerned.

(*k*) **Nur Imdad Lamps.**—250 lamps were distributed during the year in 40 villages of the District. The average rate of consumption was a little less than ¼ seer of oil a week. During early months of the year when prices permitted use of the oil the lamps were regularly used and favourable reports were recorded. As the price of vegetable oil has increased by 200 per cent. at present the use of this oil has become uneconomical and many of the lamps are not in use.

(*l*) **Shows and Exhibitions.**—Three demonstrations and four artisans were sent to the District Agricultural show at Dhulia. The Tanning Demonstration only participated at the Chandanpuri Agricultural show, District Nasik. Three tanners received proficiency medals for their exhibits.

(*m*) **Disputes and Complaints of Artisans.**—Two cases of artisans (leather workers) were found where they were being totally deceived and deprived of their income of sub-contracts by a contractor who gave sub-contracts at Deolali. One case involving over Rs. 800 was successfully settled after an investigation and by proper warning to the contractor concerned and reference to the Commanding Officer of the Company. The other case for Rs. 950 is under examination at present.

(*n*) **Technical Advice to Industrial Concerns.**—Two new soap concerns were started recently on a small scale in Nasik. These took advice from the office of the District Industrial Officer regarding appliances, processes and cost adjustment. The factories are making profitable business for the present. One dyer wishing to open a small dyeing and bleaching concern at Malegaon was supplied with data for vegetable dyeing.

(*o*) **Municipal Taxation.**—The subject of municipal taxation concerning industries was examined throughout the ten towns in the District having municipal boroughs. The rates of taxation affecting industries were scrutinised and the representatives of every industry were interviewed for complaints of any nature.

(*p*) **Rural Development.**—At all Rural Development meetings, Rural Uplift Van programmes and several War Publicity Meetings, activities of the Department were explained.

(*q*) **Touring.**—During 146 days of touring about 6,000 road miles were covered and 74 places were visited.

107. **District Industrial Officer, Surat.**

(*a*) **Survey.**—A rapid survey of small scale and cottage industries of the district was made by the District Industrial Officer, Surat, by undertaking extensive tour of the whole of the Surat District. He submitted proposals to the Director of Industries as to how improvements and expansion of some of the cottage and small scale industries of the district could be effected. During the course of the survey contact was established with a number of manufacturers and technical advice was given to them as to how they could effect improvements in the processes followed in their respective factories. The manufacturers were given details about the Subsidy and Loan Scheme and the District Sales Depot.

(*b*) **Information for Commercial Directory.**—Information for the Commercial Directory was collected and a list of manufacturers and dealers of the district was prepared by this office. Various statistical figures and important commercial information also was collected during the tour to various places in the district.

(*c*) **Loans and Subsidy to Artisans.**—Wide publicity was given to the subsidy and loan scheme to artisans and to educated unemployed. Eight past trainees of the Tanning Institute and Tanning Demonstration Parties of this Department were given loans and subsidies in this District. One subsidy was given to a candidate for manufacturing toys and photo frames, etc.

The work of the loanees was supervised from time to time.

(*d*) **Government District Sales Depot.**—A good many small scale and cottage manufacturers are taking advantage of the marketing facilities offered at the District Sales Depot, Surat, and goods of a number of artisans of the district who were too poor to keep their goods on consignment account were purchased outright by the District Sales Depot. Various purchases for the Civil Pioneer Force stationed at Surat were made through the District Sales Depot. The Commandant, Civil Pioneer Force, very much appreciated the services rendered by the Depot in this connection.

(*e*) **Sandalwood at a Concession Rate.**—Applications of local sandalwood carvers were scrutinised and were recommended for supply of sandalwood at a concession rate. Arrangement is being made to supply sandalwood to the local carvers at a concession rate of 25 per cent. of the normal cost.

(*f*) **Rural Tanning Industry in Surat District.**—The work of the Tanning Demonstrator was supervised from time to time and necessary guidance and advice was given to him.

(*g*) **Orders of the Supply Department.**—After making a rapid survey, contact was established with various small scale and cottage manufacturers with a view to find out the possibilities of executing orders of the Supply Department (which have been given to the Department of Industries for distribution). After great efforts a few manufacturers of Surat were persuaded to agree to execute some of these orders. The manufacturers were given guidance and technical advice from time to time.

(*h*) **Crude Oil and Kerosene Permits.**—This office scrutinised applications for kerosene permits for Surat district for kerosene required for industrial use. On the recommendations of the District Industrial Officer necessary permits were issued by the Collector to various factories of the district. In view of these facilities various industrial establishments were able to obtain kerosene at reasonable rates. In contrast to these the manufacturers of other districts have to pay heavy prices for kerosene required for industrial use. Applications for crude oil permits were also scrutinised and were sent to the Collector with recommendations. Similarly, applications for coal were also scrutinised and were sent to the Director of Industries with recommendations. Applications for petrol required for industrial use were also scrutinised and sent to the Collector with recommendations.

(*i*) **Weights and Measures.**—The work of the Inspectors of Weights and Measures in Surat District was supervised. Their offices were inspected from time to time.

(*j*) **Technical Library.**—A small library has been established by the office of the District Industrial Officer where technical books are available to the public for reference. A few persons have been taking advantage of the facilities offered.

(*k*) **Nur Imdad Lamp.**—Wide publicity was given to the Nur-Imdad lamps and people were given advice about the correct way of maintenance and operation of the lamp.

(*l*) **Meeting of Rural Development Board, etc.**—Meetings of the Rural Development Board, Bi-monthly meetings of District Officers, Chief Local Officers' Meetings, Taluka Officers' Meetings were attended by the District Industrial Officer and various activities of the Department of Industries were explained to the members. The Rural Development Board agreed to grant five supplementary scholarships of Rs. 15 per month, to the students studying at the Tanning Institute and the Leather Working School, Bombay.

The Rural Development Board also sanctioned 2 scholarships of Rs. 25 per month for training two weavers of Surat District at Bijapur for a period of six months. On the recommendation of the District Industrial Officer the Board agreed to get a well sunk at Chambharwad, Vapi, free of cost so that the tanners would not experience any difficulty in carrying on their industry of tanning during the summer months.

(*m*) **Report for the Backward Class Committee for introduction of small scale and cottage industries in backward classes of Surat and Thana Districts.**—An extensive tour of Thana and Surat Districts was made with a view to find out what would be the suitable industries which could be profitably introduced among the backward classes of Thana and Surat districts. After extensive survey of the territory and interviews with various leaders of backward classes and other local officers a report was submitted to the Director of Industries. The Director agreed with many of the proposals and recommendations of this Report and he sent his recommendations to the Backward Class Committee generally on the basis of the report submitted by the District Industrial Officer.

CAPTER XV.

FISHERIES.

MARINE FISHERIES.

108. **Launches.**—The year under review saw no addition to the number of launches in operation during the fishing season being eight as in the previous year. Two vessels were, however, added to the fishing fleet practically at the end of the fishing season. They were the "Nooremohamadi" and "Rahamani". The former was built by Mr. Thakur to replace the vessel of the same name lost off Goa in the previous year. The vessel was equipped with the salvaged engine from its sunken predecessor. The "Rahamani", which was bought by Messrs. Jagannath S. Parkar and Co., had originally a petrol engine, which was replaced by a 25 B. H. P. Junker engine. The boat was adapted for use as a fish carrier. One of the vessels in use during the fishing season (Hydari) was acquired by the Royal Indian Navy. A further increase in the existing fleet of launches is expected next year, when more vessels, now under construction, will be put into commission. These vessels, which are being built by the Jangira Fishing Co., will be equipped with 32 and 50 B. H. P. Junker engines. In addition, two more boats are being built by Messrs. A. B. Cursetji and Co. of Bombay. These vessels will be equipped with 100 and 50 B. H. P. engines.

The problem encountered in the previous year on account of engine trouble was magnified during the year under review owing mainly to the difficulty of obtaining spare parts and of having them made locally, in view of workshops being engaged on war orders. To overcome this difficulty the Department provided facilities to a local expert to set up a lathe at Sassoon Dock so that parts needed by the launches might be turned out promptly.

109. **Fishing Experiments.**—The vessel "Murli", for the purchase of which a loan of Rs. 10,000 was sanctioned by Government to Messrs. Jagannath S. Parkar and Co., could not be used for deep-sea fishing experiments as the Naval authorities acquired the vessel for their use.

110. **Improved Sail Boat Scheme.**—The scheme had to be abandoned owing to the war, but the principle underlying it has been fulfilled as will be seen from the previous paragraphs, wherein it is stated that two country crafts have been converted into power-propelled vessels for use as fish carriers. Enterprising business-men have been convinced of the beneficial results of the conversion of country craft, and the conversion of more such vessels during the war is expected.

111. **Fish brought by launches.**—The total quantity of fish brought by launches was 2,834,169 lbs. as against 2,724,033 lbs. in the previous year. No fish was imported into Bombay from Karachi and Malwan during the year by the Bombay Steam Navigation Co.'s steamers.

Statistics of quantity and types of fish brought by the launches are set forth in Appendix N.

112. A facility greatly appreciated by the launch owners and agriculturists was the permission accorded by the Collector of Salt Revenue to carry aboard the fishing vessels vegetables and fruits in addition to fish, whereas formerly the launch-owners were not authorised to transport fruit. This facility enabled launch-owners to make the utmost use of the available space and thus add to their takings.

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The following eight vessels, namely, "Lord Brabourne", "Lady Brabourne", "Lady Sykes", "Sir Frederick Sykes", "Karimi", "Chand Tara", "Hilda" and "Hydari", brought to Bombay between April and May, 1941, and March 1942, about 3,940,000 mangoes, representing an approximate total weight of over 2,955,000 lbs.

113. **Fish landing sites.**—As mentioned in last year's report, the difficulties arising from the lack of proper landing facilities continued in a greater degree during the year. This can only be overcome when a special area is allotted for the landing of fish.

114. **Cold Storage facilities.**—The number of ice factories and cold storages remained stationary. The demand on these plants for ice and storage facility increased, but could not be fully satisfied in view of the insufficient supplies of ammonia. The ice factory and cold storage plant at Sassoon Dock proved a boon to the launch owners and fishermen of Rewas, Dharamtar, Karanjii, Alibag etc., who land their catch at Sassoon Dock. The plant at Malwan could not be worked on account of the non-availability of ammonia.

115. **Apprenticeship.**—The scheme to train apprentices in the operation of vessels equipped with diesel engines showed further progress during the year. The total number of apprentices who have received training since the inception of the scheme is 26, out of which nine obtained certificates from the Mercantile Marine Department, 12 completed the course of training and 5 are under training.

116. **Fisheries Information Bureau.**—The Bureau continued to fulfil its useful existence. It attended to numerous inquiries on a variety of subjects. Some idea of the scope of its work may be gleaned from the work it attended to :—

(1) The Superintendent of Fisheries, Sind, wanted particulars about the fish curing yards in this Province. Detailed information was supplied to him. Likewise, he was furnished with all relevant particulars about the model fish curing sheds at Malwan and Majali.

(2) An inquiry regarding the availability of porpoise jaw oil was received from the Supply Department. A small quantity of oil was extracted and forwarded to the Department. The test report revealed that the oil was not up to the required standard. Attempts will be made to improve the quality of the oil.

(3) Information relating to localities where larvicidal fish were obtainable and other information regarding them was furnished to the Military authorities.

(4) The Director of Fisheries, Bengal, was supplied with particulars of experiments conducted by this Department on the fattening of fish in ponds and tanks. The information will be used by him for propaganda purposes.

(5) Numerous inquiries, both local and from other Provinces regarding the manufacture of Shark liver oil and its availability, its price etc., were received and dealt with by the Department.

117. **General assistance rendered.**—An idea of the general assistance given to the fishing industry will be had from the following examples :—

(1) The Fisheries Officer was appointed, during the year, a member of the Fisheries Sub-Committee of the Imperial Council of Agricultural Research. He attended the meeting of the Sub-Committee at Delhi in 1943. The

Sub-Committee considered and recommended to the Advisory Board of the Imperial Council of Agricultural Research two schemes, one for an increase in the production and an improvement of the quality of cured fish, and the other for the preservation of fish as food by curing, pickling and smoking.

(2) A scheme for the investigation of fish eggs and fish larvae available in Bombay prepared by Dr. Bal of the Royal Institute of Science, Bombay, was recommended to the Imperial Council of Agricultural Research. The scheme has been approved by the Fish Committee of the Council and is likely to be sanctioned by the Advisory Body.

(3) A firm in Bassein transporting fish to Bombay was called upon by the Regional Transport Authority to produce its lorry for inspection under the requisition order. The firm, fearing that its lorry might be requisitioned, with consequent loss of business, approached this Department for help. The Department communicated on the subject with the appropriate authority, pointing out that the lorry was engaged in trade beneficial to the country, and that its requisition would adversely affect the speedy transport of a valuable article of food from Bassein to Bombay. As a result of the Department's intervention, the lorry was not acquired and continued to fulfil its useful role.

(4) Messrs. Desai Brothers, the proprietors of the only ice factory in the Karwar area—the factory being located at Chendia—experienced great difficulty in obtaining diesel oil for the plant. As the factory directly served the needs of the fishermen at Chendia and adjoining fishing villages, the Department requested the authorities concerned for generous treatment of the firm in regard to its request of diesel oil. The request was granted.

(5) Messrs. Jagannath S. Parkar and Company, who have been actively co-operating with this Department in its various schemes, were enabled, through the help of this Department, to secure a contract from the Military authorities for the supply of fish to Military personnel in Bombay. For this purpose, the Fisheries Officer interviewed several army officers in Poona. The firm has, so far, supplied 50,000 lbs. of fish to the army. A similar contract for the supply of fresh fish by the same company from Malwan to the Military at Belgaum was also discussed and is at present under the consideration of the army authorities.

(6) The fishermen at Worli were directed by the military authorities to relinquish the use of the site where they landed fish, as the ground was required for military purposes. The Department took up their case with the military authorities, and obtained a new landing site for them. Besides, the fishermen were awarded compensation.

(7) The fishermen at Trombay were prohibited from fishing with stakes and buoys and later asked by the naval authorities to quit their village. The fishermen here, too, have received compensation for the loss suffered by them.

FISH CURING YARDS.

118. **General.**—The number of fish curing yards at which business was conducted during the year 1942-43 was 33—19 in the Ratnagiri District and 14 in the Kanara District. Out of these, eleven are in charge of 12-monthly yard officers and the remaining eight are petty yards under petty yard officers.

The principal kinds of fish brought to the yards for curing were mackerel, catfish, seer, sharks, gedar, khavli and pedwe. The seer, shark and ghol were the first to

appear but abruptly disappeared after a few weeks' duration. During the year under review, 8,802 maunds of seer, 8,232 maunds of sharks and 1,726 maunds of ghol were brought to the yards for curing as against 21,157 maunds of seer, 15,997 maunds of sharks and 1,880 maunds of ghol in the previous year.

The mackerel fishery ranked foremost in importance during the year. The season started late in October, i.e., nearly one month later than usual, but continued in full swing up to the close of the year. The catches of mackerel were heaviest at Malwan, Devbag, Vengurla, Majali, Karwar, Bingi, Chendia and Harwada. As in the previous years the contractors could not secure a sufficient number of vessels to transport salt from Uran and Sanikatta on account of the war and the yards at these places often remained without salt for several days. The sales of salt at the 33 yards during the year under review were 126,913 maunds, the first highest figure on record in the history of fish curing yards, the next highest being 90,335 maunds in 1928–29 when there were also 33 yards. The appearance of mackerel in large quantities contributed to the success of the fishing season. The sales of salt would have been yet higher if the fishing boards at Jaigad, Kalbadevi, Mirkarwada, Ratnagiri, Purnagad, Jaitapur and Vijaydurga had worked with full complements of lascars. Many of the fishing boats at these places were laid up owing to lack of crew to man the vessels as several fishermen took up jobs in the navy.

Shengala and Karmat (mixture) which were second and third in importance, appeared in fair abundance on our coast from September to March. Seer, sharks, gedar, khavli, pedwe, ghol, daghol, karli and pomfret came next in importance but they did not appear steadily during the season.

119. (*i*) **Model Fish Curing Sheds.**—As reported in the previous year, the Master Curers at Malwan and Majali continued to instruct the Yard Officers in the improved methods of curing fish. Up to the end of March the Yard Officers at Malwan, Devbag, Mobar, Kochra, Vengurla, Shiroda, Majali, Karwar, Bingi, Chendia, Kodar, Harwada, Manki, Murdeshwar and Bhatkal received training.

A number of fish curers took advantage of the model sheds. During the year under review 41 fish curers cured 450 maunds of karmat, 385 maunds of dhodi, 5 maunds of pedwa, 86 maunds of shengala, 45 maunds of khavli, 2,584 maunds of mackerel, 179 maunds of seer and 33 maunds of gedar at the Malwan Model Shed, 39 fish curers cured 1,190,000 mackerel at Majali Model Shed by wet and dry methods. As both the sheds were almost fully engaged by the fish curers throughout the busy season, the Master Curers could cure fish departmentally only when space was available. 356 black pomfrets, 41 white pomfrets, 103 sharks, 1,695 Shengala, 102 surmai, 142 ghol, 13 lbs. of sole, 4 karli and 10,542 mackerel, were cured at the Model Shed departmentally by dry as well as wet methods. 107 lbs. of prawns, fillets of seer, sole, karli and mackerel were salted in light brine. Three tins (100 lbs. approximately) of fish meal were prepared and sent to Bombay for sale. The total expenditure incurred on demonstrations was Rs. 221–12–1 as against Rs. 88–0–3 in the previous year and Rs. 276–3–6 were realised by sale of fish and fish meal. At the close of the year undisposed fish worth Rs. 17–10–0 was in balance.

At the Majali Model Shed, however, 78,000 mackerel and 65 ghol were cured departmentally by dry and wet methods. 5,250 mackerel, 2 maunds of modos and one maund of kokar were pickled in barrels with gorakapuli (tamarind) and salt, which method of curing was not known to the fishermen. The total expenditure incurred on demonstrations was Rs. 215–2–10 and the sale of fish fetched Rs. 256–14–0. The fish pickled with tamarind and salt was sent to Bombay for sale.

Samples of fish treated at the Model Sheds were sent to the Director of Food Stuffs, New Delhi. He reported that the samples were not in accordance with R. I. A. S. C. Specification No. 75 (*a*) as they contained excessive moisture and that the Department of Food Stuffs was no longer interested in the further development of dehydrated and smoked fish, as the demand was limited and as other adequate sources of supply were available.

The revised plans and estimates for the construction of sanitary sheds for curing fish at the Bingi yard and 12 sheds over the fish curing platforms at Karwar yard in the Kanara District could not, however, be executed as the revised estimates greatly exceeded the sanctioned amount. Government sanctioned a scheme for the construction of cement concrete platform at Ratnagiri and construction of permanent curing sheds at Malwan in the Ratnagiri District and Majali, Chendia and Harwada in the Kanara District, but owing to difficulties in obtaining essential building materials as a result of war-time restrictions the construction of platforms at Ratnagiri and Majali only could be taken up. This was done through the agency of the Public Works Departments at Ratnagiri and Karwar.

(*ii*) **Glazed pots for curing fish.**—The fishermen continued to use the six stoneware jars kept at six yards to cure fish. The number of jars could not, however, be added to in view of the difficulty of obtaining fresh supplies.

(*iii*) **Lighting facilities at important yards.**—On account of scarcity of kerosene, the lighting of Government petromax lamps was restricted to the busiest part of the fishing season viz., October, November and December, at Jaigad, Ratnagiri, Jaitapur, Vijaydurg, Malwan, Devgad, Vengurla and Shiroda in the Ratnagiri District and Majali, Karwar, Bingi, Chendia, Harwada, Mallukurwa, Manki and Shirali in the Kanara District. The District Magistrate of Karwar objected to the lighting of petromax lamps on the foreshore for reasons of A. R. P. The fishermen who were greatly inconvenienced by the above restriction approached this Department for obtaining relief for them. On receipt of assurance from this department that the petromax lamps would be properly screened before lighting, the District Magistrate withdrew the restrictions. The Assistant Collector of Salt Revenue, Karwar, the Military Recruiting Officer, the Executive Engineer, Karwar, the officers of the Police Department at Karwar and the Karwar Town Magistrate visited the Karwar yard and saw that the measures adopted for lighting petromax lamps at the yard premises were in conformity with the A. R. P. regulations. As the fishing season this year was very brisk, the fishermen visiting the yards derived much benefit from the better illumination provided at their respective yards.

120. **Improvement at the Yards.**—Additional land for the purposes detailed below was acquired at the following yards during the year under review :—

(*i*) **Purnagad and Majali Yards.**—An area of 4 gunthas and 4 annas was acquired for the provision of quarters for one clerk. The construction of the building could not be considered on account of war time restrictions. The clerk was housed in a rented building. For the same reasons the construction of quarters for the clerk and two peons at this yard was postponed till after the end of war.

The construction of a new salt *Kothar* at this yard was, however, taken in hand through the agency of the Public Works Department at Karwar.

(*ii*) **Harwada Yard.**—The work on a new salt *kothar* at this yard was taken in hand by the Public Works Department at Karwar.

(*iii*) **Keni Yard.**—The construction of quarters for two peons at this yard was taken in hand by the Public Works Department at Karwar.

(*iv*) **Murdeshwar Yard.**—A plot measuring 10 gunthas was acquired at this place for the purpose of erecting quarters for one clerk and two peons and also for extending the yard compound.

121. **Opening of New Yards**—(*i*) **Mirkarwada.**—A new yard was established at Mirkarwada for the benefit of the fish curers in the villages, but no curing operations were undertaken as the yard came under the control of the Department towards the end of the year. Endowed by nature with a deep and clean inshore, Mirkarwada port offers fine protection to shoaling fish. Two ramp n nets worked with profit during this fishing season and four more rampan nets were acquired before the end of the year. The sales of salt at this yard are expected to be good.

(*ii*) **Kolak.**—The establishment of a salt depôt at Kolak in the Surat District for sale of duty-free salt to fishermen for curing fish at sea has been sanctioned. This will be the first depôt of its kind to the north of Bombay.

(*iii*) **Paj.**—The Collector of Ratnagiri directed the Inspector of Fisheries, Ratnagiri, to survey the possibilities of opening a yard at Paj village in the Ratnagiri District. The Inspector's recommendations for establishing a yard at this place are under consideration of this Department.

(*iv*) **Palshet.**—The fishermen of Palshet, Ratnagiri District, have applied for a yard at their village and their request is being investigated by the Department.

122. **Closing of Yards—Talasil Yard.**—The sales of salt at the Talasil yard in the Ratnagiri District were very unsatisfactory since its establishment and even in the best of years the yard did not do well. In order to minimise the expenditure on its maintenance, the yard was converted from a nine-monthly basis to a petty yard in 1940–41. The Inspector of Fisheries continued to impress on the fishermen of Talasil the need for resorting to the yard for curing fish and that failure to do so would result in the closure of the yard. These warnings did not have any effect as the sales of salt further declined to 143 maunds in 1940–41 and 189 maunds in 1941–42. This fact was also brought to the notice of the Collector of Ratnagiri who agreed to the proposal of this Department to close the yard as the fishermen were not keen on availing themselves of the facility. Government were, therefore, approached for permission to close the yard and in accordance with their decision the yard has been abolished with effect from June 1, 1943.

123. **Damages to Yards**—(*i*) **Jaigad Yard.**—The Executive Engineer, Ratnagiri, who was requested to inspect the site and suggest measures to prevent erosion, recommended the use of rubble as a protection. He also advocated the heightening of the present embankment. The aforesaid proposals are being carried out departmentally.

(*ii*) **Kalbadevi Yard.**—A considerable portion of land to the west of this yard was washed away by the inroads of the sea. The compound wall was reconstructed at some distance from the affected site. Permanent measures against the menace will be necessary if the erosion persists.

(*iii*) **Mobar Yard.**—As the erosion of the creek persisted, the provision of a permanent retaining wall at this yard was entrusted to the Executive Engineer, Ratnagiri, for execution during the year under review.

124. **Transactions at the Yards.**—During the year a total quantity of 447,896 maunds of fresh fish was brought to the yards, 126,913 manuds of salt were issued for curing fish, 51,966 maunds being issued to the yards in the Ratnagiri District and 74,947 maunds to the yards in the Kanara District, as against a total quantity of 90,314 maunds issued last year in both the Districts. The quantity of cured fish

removed from the yards was 331,961 maunds. 54,782 maunds of salt were indented for from Uran for the yards in the Ratnagiri District and 57,475 maunds from Sanikatta for the yards in the Kanara District.

The stock of salt at the 33 yards at the beginning of the year was 55,811 maunds and at its close 53,323 maunds.

Some fishermen of Boria, Jaigad, Varoda, Kalbadevi, Ratnagiri, Manki and Murdeshwar yards availed themselves of the concession of taking duty-free salt to preserve catch at sea. The quantity of salt issued for the purpose was 579 maunds in the Ratnagiri District and 66 maunds in the Kanara District as against 772 maunds in the previous year in the two Districts.

745 maunds of salt were issued to agriculturists free of duty from the fish curing yards for manurial purposes against 1,428 maunds in the previous year. The issue price of denatured salt for manurial purposes remained unchanged namely 8 annas per maund.

125. **Issue Price of Salt.**—The issue price of salt to fish curers continued to be Rs. 1-1-0 per maund.

126. **Financial result of the working of the Yards.**—Reference is invited to Appendix O at page 101 showing the *pro forma* account of the fish curing yards for the year under report. It will be noted that the net expenditure incurred during the year inclusive of the price of the salt issued, the pay of the entire staff, the pensionary charges, etc., was Rs. 1,09,826. Against this the receipts were Rs. 1,36,576. The net profit from the operation of the fish curing yards was therefore Rs. 26,750. A detailed account of the transactions at the 32 yards during the period is furnished in Appendix P.

127. **Experiments**—(*i*) **Manufacture of sardine oil and guano.**—None of the factories at Majali in the Kanara District manufactured any oil and guano, as "sardines" did not appear on the coast during the year.

(*ii*) **Smoke House.**—Government sanctioned the construction of a smoke house at the Ratnagiri fish curing yard, but as the final plans and estimates framed by the Executive Engineer, Ratnagiri, considerably exceeded the allotted amount Government were again approached for approval. On the completion of the smoke house, experiments in the smoking of fish will be conducted with a view to ascertaining the prospects of marketing it and the establishment of this industry.

128. **Miscellaneous**—(*i*) **Use of salt earth.**—As in the previous years the fishermen of Kalbadevi, Purnagad, Mumbri, Mithbao, Achra, Talasil, Devbag and Kochra in the Ratnagiri District and Majali, Kodar, Keni, Gangawali, Kumta, Manki, Murdeshwar and Shirali in the Kanara District used salt earth on an extensive scale to cure fish despite ceaseless propaganda against its use by the Inspector of Fisheries.

(*ii*) **Co-operative Societies.**—The Fish Curing Yards Establishment Co-operative Society Limited, Ratnagiri, continued to do good work under the Chairmanship of the Inspector of Fisheries and retained its "A" class. At the close of the year, there were 85 members on its roll, the amount subscribed was Rs. 477 with a paid-up share capital of Rs. 3,970. Out of an aggregate loan of Rs. 1,520 granted during the year, Rs. 573 were recovered in time. The Society holds Defence Bonds of the value of Rs. 300.

Fishermen's Co-operative Credit Society at Karla (Ratnagiri), Majali, Karwar and Bingi functioned as mere credit societies.

A Co-operative Credit Society organised for the benefit of Muslim fishermen of Sakri-Nata (Jaitapur) was receiving the attention of the Registrar of Co-operative Societies, Poona, for its registration.

A Co-operative Credit Society is being organised for the benefit of Muslim fishermen of Rajiwda (Ratnagiri).

(*iii*) **Loans and Subsidies.**—A reference is invited to Chapter III where loans and subsidies to cottage workers are mentioned at some length. Details of the loans and subsidies given to fishermen are mentioned here :—

(*a*) A fisher youth of Ratnagiri extracting shark liver oil was granted a loan of Rs. 300 free of interest, for the extension of his business as the demand for shark liver oil as a substitute for cod liver oil had greatly increased.

(*b*) Nine fishermen of Ratnagiri owning large fishing machwas, could not dispose of their stock of swim bladders and shark fins owing to closure of the normal markets as a result of the war. Each of the fishermen was granted a loan of Rs. 200.

(*c*) One fisher youth of Chendia in Kanara District, who was trained in the new methods of fish curing at the Majali Model Shed, was granted a loan of Rs. 20 free of interest, to cure fish on scientific lines on a large scale at the Karwar yard.

(*d*) A loan of Rs. 17,500 was sanctioned by Government to Messrs. Jagannath S. Parkar & Co., for the purchase, at a cost of Rs. 22,500, of an ice factory and cold storage plant at Malwan. The plant could not function owing to the lack of ammonia.

(*iv*) **Industrial Exhibition.**—In February 1943, a "Farmers' Week" was organised by the Collector of Ratnagiri at Shirgaon (Ratnagiri). Fisheries products of various descriptions were exhibited by the Fisheries Inspector—a conspicuous feature of the Farmers' Week.

(*v*) **Offences.**—A case of stealing duty-free salt and other implements at night from one of the fish curing huts at the Murdeshwar yard was detected by the Yard Officer and the culprit was punished at the Bhatkal Court with a fine of Rs. 21 and imprisonment for one day.

III. FISHERIES SCHOOLS.

129. Government sanctioned the establishment of two fisheries schools, one at Ratnagiri and the other at Karwar, for imparting special type of instruction intimately related to the life of a fishing village. The two schools started functioning on 23rd November 1942. The Ratnagiri Fisheries School is located in one of the buildings of the School of Industry, belonging to this Department, while the Karwar Fisheries School is housed in a rented building which is very commodious and commands a good view of the sea. Both the schools, with their location in the centre of fishing villages and with carpentry workshops and illustrative charts, models and apparatus are a source of attraction to the fisher children. The number on the rolls at the schools in Ratnagiri and Karwar was 100 and 80 respectively. The schools had five classes including infant ; the 6th and 7th will be started next year. The academic year of the Fisheries Schools begins after the Divali holidays in November and is divided into two terms, the first term from November to April and the second term from June to November (up to the beginning of the Divali holidays in November). Annual examinations will be held in October or November when the fishing season will be in full swing and the academic year will also end. During the year under review several distinguished persons visited the two schools and all were unanimous in their opinion of the excellence of the work being done there.

IV. FRESH WATER FISHERIES.

130. Development of fresh water fisheries continued to engage the attention of the Department during the year. Two consignments of carp fry, each of about 10,000 individuals, were imported from Patna and used for stocking permanent waters and for fattening experiments.

Investigations to establish a source of supply of suitable fingerlings from Ahmedabad)istrict were also continued during the year. About 2,000 mixed carp-fry, hardly " in length, were collected near Ahmedabad and brought to Bombay. The collection as liberated in a pond at Bandra. Examination after five months revealed that the berated fry belonged to Catla, Rohu and Mirgal species. Apart from these, a large ercentage of inferior fishes formed part of the collection. Identification of the live y in their early stages was not possible, and further intense research will have to be onducted to discover minute features distinguishing one species from another. These shes apparently breed in the vicinity of the Bokh reservoir and Himatnagar dam on e river Hathmati. Investigations have to be continued, however, to determine the cation of their breeding grounds as well as whether the Bokh reservoir could serve a regular source for the supply of fingerlings for stocking sheets of water in ombay.

131. **Stocking of permanent waters.**—A consignment of 10,000 carp-fry from atna including catla, rohu and mirgal was introduced in the Visapur reservoir in hmednagar District in July, 1942, at the expense of the Irrigation Department. he conditions in the reservoir are favourable for the growth of carps and the fish e expected to breed in the river Hanga which feeds the reservoir during the onsoon.

About 150 Catla, Rohu and Mirgal were fattened in the ponds at Bandra and Pali ill and later introduced into the river Ulhas near Badlapur. Introduced specimens ere 8" to 14" in length and should breed in the river.

Stocking of Mahim-Kurla creek was continued for the fourth year. About 2,360 gerlings of Etroplus brought from Karwar aboard the fishing launches were troduced in the creek. The creek has thus been stocked with about 4,500 fingerlings ring the past four years and it is hoped that within the next year or two, reliable idence of the fish having bred in the creek would be obtainable.

132. **Fish Fattening Experiments.**—One of the consignments of carp-fry from tna was utilised for fish fattening experiments. About 10,000 mixed carp-fry nsisting of catla, rohu and mirgal were liberated in tanks at Kurla, Thana, Bandra, undoli and Pali Hill on July 17, 1942. The total cost of the consignment including the ilway freight, travelling allowance of the attendant and other expenses amounted to . 166; while the actual cost of fry was Rs. 25 only. The total proceeds for the year ounted to Rs. 685.

The Kurla tank was stocked with 36,000 carp-fry and the fishing rights of the tank re disposed of by public auction for Rs. 400. The right to fish in the tank was er re-auctioned for Rs. 450. The yield of a revenue of Rs. 400 from the disposal the fishing rights in a tank barely covering $3\frac{3}{4}$ acres is remarkable.

The Jail tank at Thana was stocked with 2,200 carp-fry. The fishing rights were posed of by public auction for Rs. 210. The comparatively small amount realised s due to insufficient number of bidders at the auction.

The Gundoli and Pali Hill tanks were stocked each with 1,000 carp-fry. About) Catla, Rohu and Mirgal were removed from the Pali Hill tank and introduced into Ulhas river. The remaining fish in the tank was sold departmentally for Rs. 51. e Gundoli tank overflowed during the monsoon and good part of the fish escaped. e tank was netted in May 1943, and it fetched Rs. 23–12–0 only.

About 2,000 carp-fry have been liberated in the large tank at Bandra which will netted next year. About 2,000 carp-fry from Ahmedabad was stocked in a small k at Bandra. There were very few Catla and Rohu in the fry but the total sale-oceeds of the fattened fish amounted to Rs. 35.

The fish fattening experiments thus contributed Rs. 720 to the Government's venue and added about 3,500 lbs. of fresh fish to the fish supply of the city.

133. Acclimatisation experiments.—About 700 fingerlings of mullets w acclimatised to fresh water but the growth was unsatisfactory. The fish grew t in 8 months. Acclimatising ½" fry of scatophagus was also attempted during the but the fry in general do not seem to stand the change. Their acclimatisation a large scale has, therefore, not been possible.

134. Gourami.—Out of the 360 Gourami transferred to the Victoria Gardens Cadell Road Mill Ponds last summer on account of severe draught in the Ban tank about 270 individuals were brought back to the Bandra pond. The fish are thriving normally. The fish which remained in the Victoria Garden pond h started breeding. Gourami have also commenced to breed in the Tulsi lake wh several adult specimens were introduced last year.

135. Khopoli Fish Farm.—Detailed plans and estimates of the Khopoli fish f were completed. Tenders were called from the local contractors. Only one contra responded with an estimate of Rs. 1,16,000 as compared with the original estim cost of Rs. 22,500. The cost was, therefore, considered to be very excessive and project has been postponed till after the war.

136. Other activities.—About 3,000 fingerlings of Megalops were collected supplied to the Bombay Provincial Angling Association.

Specimens of brackish water fish were supplied to Dr. Bana, Medical Offi Bombay Port Trust, for experiments on larvicidal propensities of the fish.

About 200 Gambusia were again introduced in the Bandra tank during the year keeping down the mosquito trouble. The fish are breeding profusely in the tan

About 40 species of both marine and fresh water fish were identified for the resea students at the Ramnarayan Ruia College, Matunga.

An extensive collection of fresh water fish available in the Ahmedabad District made during the visits to the district and the specimen were identified.

Three papers were completed and sent to press for publication, namely (1) Breed habits and early stages of the Gourami, Osphronemus goramy (Lacepede), (2) F and Fisheries of Ahmedabad and (3) Breeding habits and early stages of Megal cyprinoides.

V. SHARK LIVER OIL.

137. The manufacture of medicinal shark liver oil continued during the year at various centres along the coast, particularly at Bombay, Ratnagiri and Jaitapur. T season of sharks was fairly brisk this year and the various oil extraction centres wor normally with the result that about 68,000 lbs. of vitaminised shark liver oil of B standard was produced during the year, marking a distinct rise over the output of previous year. The figure must yet be larger as, besides, a good deal of neat sh liver oil was also sold directly by fishermen to dealers. The demand for neat sh liver oil was very high this year and the prices were very remunerative. In o instance, oil very rich in vitamin A commanded a rate of Rs. 250 per 4-gallon tin.

A new centre for the manufacture of oil was opened at Bassein and the possibil of opening one more at Karanja, a fishing village near Bombay, was also investigat

With a view to introduce shark fishing as a step towards increasing the producti of medicinal shark liver oil in Bombay, a private party built two power-propelled bo to be used exclusively for shark fishing. Before they commenced their operatio however, the boats were acquired by the naval authorities for war purposes.

Vitamin A assays of about 60 samples of shark liver oil were carried out on beh of the public at a fee of Rs. 3-8-0 for each sample.

Research work carried out during the year led to the collection of valuable information ith regard to the life histories of some of the commercially important sharks and rays. itamin A assays of their respective liver oils also furnished a basis whereby fishermen uld grade their catch of sharks in respect of the sale of their livers—a basis on hich they can command a better price for the livers of better quality sharks. A udy of the physical and chemical constants of the various shark liver oils was mpleted during the year.

CHAPTER XVI.

THE CENTRAL STORES PURCHASE SECTION.

138. With a view to deriving the advantage of centralised purchase, Government ere pleased to create a Central Stores Purchase Organisation, with effect from t June, 1942, for making purchases of stores required by different Government epartments, and attach it to the Department of Industries. The Director of dustries is ve ted with the powers of the Central Stores Purchasing Officer to overnment in addition to his other duties.

139. The functions of the Stores Purchase Section are as under—

(*i*) to draw up standard specifications for stores and articles of stationery as far as possible,

(*ii*) to invite tenders for the requirements of the Government of Bombay in respect of stores and articles of stationery,

(*iii*) to scrutinise tenders,

(*iv*) to settle terms of rates, delivery, payment, etc., on all contracts in consultation with consuming departments concerned, when and if necessary,

(*v*) to intimate acceptance or non-acceptance of tenders,

(*vi*) to enter into agreements with contractors,

(*vii*) to have stores supplied by contractors inspected by the technical officers of the Government Departments, and

(*viii*) to advise generally in securing all possible economy and efficiency in the purchase of stores, stationery, etc.

140. During the period of 10 months from its inception, the Stores Purchase ection made purchases of the total value of a little under Rs. 13½ lakhs as shown elow :—

I. (*a*) Direct purchase—

	Rs.
(1) Textile (including yarn), cotton and woollen fabrics..	4,16,535
(2) Leather	13,743
(3) Stationery	14,141
(4) Electric bulbs	2,432
(5) Chemicals	2,723
(6) Machinery : electric, mechanical hardware and tools	13,544
(7) Press articles	20,437
(8) Kit Boxes	17,650
(9) Utensils	34,569
(10) Bicycles	12,433
(11) Cots	18,067
(12) Water bottles	7,744
(13) Miscellaneous and sundry articles	13,651
Total ..	5,87,669

(*b*) The details of the purchases stated above are tabulated below :—

—	Manufactured on handlooms.	Manufactured in the Province.	Manufactured in Other Provinces.	Imported.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a.
Textiles	1,17,684 0 0	2,98,851 0 0	....	....
Stationery	....	11,295 3 9	....	2,845 0 [illegible]
Machinery and hardware ..	....	3,384 12 0	1,436 0 0	8,723 11 [illegible]
Chemicals	....	449 0 0	....	2,274 0 [illegible]
Press articles	....	17,736 0 0	73 2 0	2,627 13 [illegible]
Leather	....	13,742 0 0	....	....
Bicycles	....	12,433 2 0	....	....
Electric Bulbs, etc.	....	....	870 6 0	1,562 0 [illegible]
Kit boxes	....	17,650 0 0	....	....
Cots	....	18,067 0 0	....	....
Water bottles	....	7,744 0 0	....	....
Utensils	....	34,569 0 0	....	....
Miscellaneous and sundry articles	....	13,335 9 6	....	316 0 [illegible]
	1,17,684 0 0	4,49,256 11 3	2,379 8 0	18,348 8 [illegible]

II. (*a*) **Annual Contracts.**—In addition to the purchases mentioned abov[illegible] tenders were invited and contracts fixed for textiles, packing cases, leather, drawin[illegible] articles, stationery (ordinary and superior) required by the Superintendent, Govern[illegible] ment Printing and Stationery, Bombay, for the financial year 1943–44. The detai[illegible] of the orders of the total value of Rs. 7,61,142 placed on behalf of the Superintenden[illegible] Government Printing and Stationery, are shown below :—

	Manufactured in the Province of Bombay.				Manufactured in other Provinces.		Imported.
	Handloom.	Handmade.	Partly hand and machine made.	Machine made.	Handmade.	Machine made.	
	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs.	Rs.	Rs.
Textiles ..	1,91,252	46,862 8 0 (Umbrellas)	....	1,16,447 3 0	....	12,645	....
Stationery—							
Ordinary ..	....	26,247 0 0	3,461 0 0	841 0 0	6,333	52,616	6,8[illegible]
Superior ..	....	17,693 0 0	1,685 0 0	81,604 7 0	....	....	12,1[illegible]
Drawing articles ..	....	....	....	265 8 0	....	2,561	72,0[illegible]
Straw Boards ..	....	....	....	60,840 8 0	....	....	....
Leather ..	....	7,893 0 0	....	....	....	....	....
Packing cases ..	....	41,100 0 0	....	....	....	....	....
	1,91,252	1,39,795 8 0	5,146 0 0	2,59,998 10 0	6,333	67,822	91,0[illegible]

141. The details of orders referred to in the previous paragraphs are tabulated below :—

	Rs.
(1) *(a)* Textiles—	
Drill	45,972
Mulmul	52,017
Dungry	30,141
Jaconette	15,867
Longcloth	13,079
Pugree cloth	48,611
Mazri	32,042
(b) Woollen—	
Blankets	79,290
Socks	8,033
Jersey	14,421
Balaclava caps	2,929
Belts, Chevrons, etc.	13,118
(c) Other—	
Haver sacks and housewives	7,580
Yarn	1,76,030
Canvas bags and ground sheets	12,095
Umbrellas	46,863
Thread, sewing, & twine, etc.	9,724
Towels	6,507
Razais	15,498
Tape	5,564
Hessian gunny cloth	12,976
Tags	79,112
Oil cloth	11,538
Mosquito nets	15,120
Miscellaneous	29,614
(2) Engineering and Hardware tools, etc.	13,544
(3) Leather	21,636
(4) Stationery	2,23,655
(5) Electric goods	2,433
(6) Packing cases	41,100
(7) Drawing articles	74,858
(8) Chemicals	2,723
(9) Utensils	34,569
(10) Press articles	20,437
(11) Kit boxes	17,650
(12) Bicycles	12,433
(13) Cardboards	60,840
(14) Cots, wooden	18,067
(15) Water bottles	7,744
(16) Miscellaneous	13,651
Total	13,49,081

142. Inspection.—The inspection was carried out partly by the staff attached to the Industries Department and partly by the indentors themselves.

143. Indents were received during the year from the following departments :—

(a) Regularly.

(1) Superintendent, Government Printing and Stationery.
(2) Commandant, Civil Pioneer Force.
(3) Inspector General of Prisons for Textiles.
(4) Inspector General of Police for Textiles.
(5) Technical Schools under Industries Department.

(b) Occasionally.

(1) Surgeon-General, Bombay, including Hospital Superintendents.
(2) A. R. P. for blankets only.
(3) Commissioner of Police.
(4) District J· dge.
(5) Labour Welfare Officer.
(6) Educational Department.
(7) Excise Department.
(8) Public Works Department, Executive Engineers.

144. General.—In placing the orders preference has been given in the following order :—

(1) Articles manufactured by cottage workers.
(2) Articles manufactured in this Province.
(3) Articles manufactured in other Provinces.
(4) Imported.

Due consideration was also given to the transport difficulties and wherever possible efforts were made to locate and place orders locally or with suppliers near about the location of the indentors.

As can be observed from a previous paragraph, indents were received regularly from some Government Departments for stores required by them. Indents for similar type of articles were received from different departments at different times resulting in separate orders being placed for the same type of articles at different times. Economy can be achieved if the requirements of different departments for the same or similar type of articles are consolidated and ordered at one time. It seems possible and desirable to reduce to a minimum the types of articles required by different departments by standardising as far as possible articles differing slightly in quality and specification.

Difficulties were experienced under the present conditions in locating the sources of supplies and inducing the suppliers to adhere to the delivery periods.

CHAPTER XVII.

COMMERCIAL AND INDUSTRIAL INTELLIGENCE SECTION.

145. During the second year of its existence the Commercial and Industrial Intelligence Section showed further expansion of its many-sided activities. The intensification of the war and internal economic developments created an atmosphere favourable for the starting and operation of many new industries, particularly small-scale ones. The industrialists found in the new Section a ready machinery for getting much of the information wanted by them. Apart from satisfying this public need the Section contributed to the war effort by conducting expeditiously many enquiries for the Supply Department of the Government of India.

The work of the Section was somewhat hindered by the lack of adequate staff. It was practically at the end of the period under review that administrative sanction was received for the appointment of certain additional staff proposed by the Department.

146. The main duties assigned to the Section and its present activities are indicated briefly as follows :—

(1) It collects and disseminates industrial and commercial information to the public and maintains such information in properly indexed files.

(2) It collects statistics and other information regarding production of industrial concerns in the Bombay Province.

(3) It collects and supplies statistics and other information regarding the movement of internal and overseas trade.

(4) It is preparing an authoritative Commercial Directory for the Bombay Province.

(5) It finds out sources, actual as well as potential, of raw materials, their prices and other incidental expenses, e.g., cost of transport,

(6) It studies actual, as well as potential, markets for the industrial products of the Bombay Province and the movement of products and the agencies and channels, through which it takes place.

(7) It studies freight rates fixed by the Railways, as amended from time to time, and the Octroi and Terminal taxes imposed by the Local Bodies, to enable the Department of Industries to make representations, where necessary, in the interest of the industry or trade concerned likely to be adversely affected.

(8) It makes available to the public information regarding patents, trade marks, etc.

(9) It is reorganising, on modern lines, the Technical and Commercial Library and Reading Room of the Department of Industries.

147. The internal organisation of the Section was described at great length in the last year's Report. As mentioned therein, the Section has started work with only four Divisions, viz. (1) Commercial and Industrial Intelligence Division, (2) Statistical Division, (3) Research Division and (4) Library Division. Below is given an account of the work of these Divisions during the year under report.

148. **Commercial and Industrial Intelligence Division.**—The main function of this division is to collect, collate and disseminate useful commercial and industrial intelligence with a view to foster trade, commerce and industry of this Province. Throughout the year under report, the Division was busy going through office files, books, journals, etc., and thus trying to centralise the scattered material relating to the industries of India in general, and this Province in particular. Attention has specially been devoted to the study of (*i*) Statistics of exports, imports, production and consumption of raw materials and manufactured goods in the Bombay Province, (*ii*) Imposition of taxes on trades and commerce, e.g., sales and consumption tax, excise and customs duties, etc., (*iii*) Export and Import prohibitions, export and import quotas, certificates of origin, priority certificates for exports, etc. The material thus gathered has been maintained in indexed files. Card indices of all the manufacturers and dealers of the Province have also been prepared.

The Section received requests for different kinds of information from a variety of sources during the year. The relevant information is given below :—

SOURCES OF INQUIRIES.

From	
(1) The Commercial and Industrial Community of Bombay ..	759
(2) Departments of Bombay Government	49
(3) Inter-Provincial Inquiries—	
(*a*) The public of other Provinces	264
(*b*) Provincial Governments	71
(4) The Government of India	253
(5) Outside India	22
Total ..	1,418

TYPES OF INQUIRIES.

(*a*) Commercial	274
(*b*) Large and Organised Industries	261
(*c*) Small and Medium-sized Industries	310
(*d*) Cottage Industries	72
(*e*) Miscellaneous	501
Total ..	1,418

In addition to these written queries, many people saw the Officer-in-Charge of the Section for getting the information wanted by them. The public found the advice given very helpful. On an average 10 such weekly calls were paid by the public.

It will be noticed from the figures presented above that the cottage workers are not taking as much advantage of the Section as they should have done. This is not surprising in the conditions in which work is carried on by these people. However, the Section is now engaged in devising ways and means by which it can be of more use to these people.

Typical inquiries received and dealt with during the year are summarised at the end of this Chapter.

149. Commercial Directory.—Work in connection with the Commercial Directory proceeded apace. The collection of the names and addresses of dealers and manufacturers in Bombay City and the three districts of Surat, Nasik and Belgaum is practically complete and the material is classified both industry-wise and district-wise. At the same time steps have been taken to extend the scope of the Directory, so as to embrace all the remaining Districts of the Province. The Division also did some work in planning the material, which is to form Part I of the Directory, viz., Commercial, Industrial, Financial and Statistical information pertaining to the Province.

150. Statistical Division.—In the last year's report attention was drawn to the deplorable lack of statistics pertaining to the industries of the Province. To remedy the situation, the Statistical Division took measures in two directions during the year viz. (*i*) Preparing analysis of all relevant scattered material and (*ii*) devising means

to fill in the gaps. As for (i), all the publications of the Director of Statistics, Calcutta, and of the several Departments of the Central and Provincial Governments have been fully utilised. From this has been prepared a tabular statement showing the progress of the different industries of the Province. Statistics have also been compiled of many industries on an All-India basis, such that the industrial progress of this Province vis-a-vis the rest of India may be carefully watched. In addition, the Division has taken all the preliminary steps needed in the conduct of the Census of Industrial Production, to which a reference was made in the last year's report. Further work in connection with the Census was held up by the Government of India. It is hoped, however, to carry out the Census, as soon as the instructions promised by that Government are received.

This Division also collected detailed statistics from a variety of sources concerning the industries of the Province, in connection with the preparation by the Department of proposals for post-war reconstruction.

151. **Research Division.**—The Research Division was handicapped due to the lack of adequate staff. The principal duties of this Division are : (1) to prepare a memorandum on the sources of raw materials existing in the Province and of their prices ; (2) to find out the ways and means and the markets for the industrial products of the Province, the movements of such products and their final destination. In this connection the Division studies freight rates fixed by the Railways and the Octroi and Terminal taxes fixed by Local Bodies in various Districts to enable the Department to make representations, whenever necessary, in the interest of the industries or trading concerns of the Province. The work put in by the Division was appreciable. Since its inception the Division has prepared the following Departmental reports :—

(1) Organisation of the Commercial and Industrial Intelligence Section.

(2) Census of Industrial Production papers including the following administrative notes :—

(*a*) Schedules "A" and "B" for Large and Small-scale Organised Industries with General Instructions for making returns for the Census of Industrial production in Bombay Province, 1943.

(*b*) Administrative Note on Draft Proposals for Census of Industrial Production in the Bombay Province.

(*c*) Administrative Note on the Census of Industrial Production in Surat, Nasik and Belgaum—District Industrial Officers' Districts.

(*d*) Questionnaire "B" for Small-scale and particularly Cottage Industries, to be filled in by Investigators.

(3) Administrative Note on District Industrial Surveys—Specific and Territorial.

(4) Report on the Bell Metal Industry at Songir, West Khandesh, with special reference to the position of the industry in the Bombay Province.

(5) Report on the Groundnut Oil Production in Bombay Province and the Estimated Oil Pressing Capacity for Bombay City and Suburbs.

As the General Division could not be organised due to the paucity of staff, the Research Division undertook the work in connection with the dispute cases referred to it by the Director of Commercial Intelligence, Calcutta. The origin of these cases and the procedure followed in settling them were referred to in the last year's report. The cases numbered 20 during the year.

152. Commercial and Technical Library Division.—This Division prepared a complete catalogue of all the books in the Library, the classification being on the lines followed in the Commercial Library and Reading Room of the office of the Director of Commercial Intelligence, Calcutta. Card indices have also been prepared of all the books in the library. About 200 new publications have been added thus bringing the total number of books, Directories, etc., in the Library to 7,177. The Library is increasingly made use of by the public of Bombay.

The following are the more important Indian and Foreign Magazines received in the Reading Room :—

Indian.

(1) Indian Textile Journal.
(2) Science and Culture.
(3) Commerce.
(4) Indian Trade Journal.
(5) Monthly Surveys of Business Conditions.
(6) Quarterly Journal of the Board of Scientific and Industrial Research.
(7) Industry.
(8) Current Science.
(9) Textile Digest.
(10) Udyam.
(11) Indian Finance.

Foreign.

(1) The Times Trade and Engineering Supplement.
(2) Machinery.
(3) Chemical and Metallurgical Engineering.
(4) Dyer.
(5) Industrial Chemist.
(6) Modern Plastics.
(7) Food Industry.
(8) Toys and Novelties.
(9) Science News letter.
(10) Wood.

153. Typical inquiries received and dealt with by the Commercial and Industrial Intelligence Section during the year 1942–43.

(1) **Oil Mills in the Province.**—Government wanted information about the capacity and normal output of the different oil-mills in the Bombay Province, to enable them to investigate the possibilities of substituting the use of vegetable oils in the place of mineral lubricants. The Section approached as many as 124 mills in the matter and the information received from them was passed on to Government in a tabular form.

(2) **Flash Light Batteries.**—The Director of Commercial Intelligence, Calcutta, desired information about the manufacturers of Flash Light Batteries in the Province together with their annual output. Enquiries were made with various battery manufacturers and the result was communicated to him.

(3) **Skimmed Milk.**—The Civil Surgeon, Bijapur, had requested the Superintendent, J. J. Group of Hospitals, Bombay, to supply him with information about any firm that could supply skimmed milk in stated quantities. The letter was forwarded to this Department for disposal. After detailed enquiries, the required information was supplied to the Civil Surgeon.

(4) **Potash Alum.**—A Bombay firm wanted to establish business connections with Indian manufacturers of Potash Alum. The Directors of Industries of the different Provinces and States were addressed and the information collected was communicated to the firm.

(5) **Lemon Grass Oil.**—A party desired to be informed of firms in India and U. S. A. dealing in Lemon Grass Oil. The names and addresses of the dealers were obtained in consultation with the American Consulate and transmitted to him.

(6) **License Fees for premises.**—The Director of Industries, Travancore, wanted to know whether Municipalities in Bombay were permitted to levy license fees for premises which had already been licensed by Government. The relevant information was supplied to him after consulting the Bombay Municipal Commissioner in the matter.

(7) **Red Oxide.**—A Bagalkot merchant wanted to know the names of importers of Red Oxide and soap stone in certain Portuguese Territories. Apart from the information available on office records, the Portuguese Consulate was consulted and the result was communicated to the party.

(8) **Lacquer Paint Manufacture.**—The Director of Commercial Intelligence, Calcutta, desired to know the names and addresses of Lacquer Paints Manufacturers in this Province. All producers of Paints and Varnishes were addressed in the matter and those who were interested in the manufacture of Lacquer Paints were put in touch with the Director.

(9) **Manufacture of Resin, Oil Cloth, etc.**—An export-import firm of Bombay desired to enter into business connections with manufacturers of resin, oil-cloth, linoleum and related goods. Particulars about the producers in the whole of India were supplied to the firm after exhaustive investigations.

(10) **Magnesite Crude.**—An Ahmedabad Chemicals Factory used to get their supplies of Crude Magnesite from Salem. Due to the transport difficulties, they were anxious to know whether there was any other nearer source for supplying them the requisite quantity of the raw material. The party was promptly supplied with the information collected by the Section.

(11) **Record Syringes.**—A local concern engaged in the manufacture and repairs of record syringes and other instruments experienced difficulties in getting spare parts, due to war conditions. They, thereupon, requested this office to supply them the names of American Manufacturers and Exporters of the articles. The requisite information was communicated to the party in consultation with the American Consulate.

(12) **Incandescent Lamps.**—A local manufacturer of mantles used for incandescent lamps wanted to be put in touch with the petro-max dealers of Dacca. The Director of Industries, Bengal, was addressed in the matter and the information received from him was communicated to the party.

(13) **Fuel and Furnace Oils.**—The Controller of Supplies, Bombay, wrote to this office saying that fuel and furnace oils for mixing with Creosote for wood preservation were no more available. He desired to be informed of places at which large quantities of other suitable substitutes like groundnut oil, rape oil and neem oil could be obtained. The requisite particulars were collected and supplied to him.

(14) **Hand-made Paper.**—The Controller, Central Stationery Office, Calcutta, at his request was furnished with a list of hand-made paper manufacturers with a short note about their capacity to supply such papers.

(15) **Begatelle Boards.**—A concern in Bombay manufacturing on a large scale carrom and begatelle boards used to get their supplies of ply-wood from Finland and America before the war. As the articles could no more be obtained from abroad, they requested this Department to contact them with manufacturers or stockists in India of superior-grade ply-wood. The desired information was transmitted to the party.

(16) **Cloth Strips.**—A leading daily of Bombay desired information for one of its advertisers anxious to dispose of a large quantity of cloth strips left out after

making suits and other men's and women's garments. The names of the likel consumers were communicated to the enquirer.

(17) Polishing Stones.—An engraving factory in Bombay experienced grea difficulties in getting their regular supplies of polishing stones from England. The desired business connections with quarries producing slate or soft stones. Ful information was promptly made available to the firm.

(18) Hirda.—The Forest Utilization Officer, Bombay Province, Poona, enquired about trade varieties of Hirda in Bombay Province and their local origin. Th matter was referred to the likely dealers in the article and information received fron them was supplied to the Officer.

(19) Liquor Ammonia.—A concern in Punjab manufacturing Liquor Ammoni of various strengths, desired introduction to big chemists of the country. They therefore, approached the Director of Industries, Punjab, in the matter who in turn requested this Department to put them in touch with the parties in the Provinc interested in the article. The name of the firm was passed on to the local Chemist and Druggists Association, with suitable recommendations.

(20) Shoe and Boot Laces.—An Australian merchant enquired of a Calcutt firm about quotations of laces for boots and shoes. The matter was eventuall referred to this office. Contact was immediately established with the lac manufacturers and the names and addresses of the parties who evinced interest i the matter were passed on to the Calcutta firm through the Director of Industries Bengal.

CHAPTER XVIII.

TECHNICAL AND INDUSTRIAL EDUCATION.

154. Number of Schools.—The numerical strength of technical and industria schools in the Province during the year under review was as follows :—

Government Technical Institutions	6
Schools maintained by public and private bodies but aided by the Department	28
Institutions only recognised by the Department	39
Government Reformatory and Settlement Schools ..	4
	77

A complete list of these institutions is given in Appendix Q to the Report.

THE COMMITTEE OF DIRECTION FOR TECHNICAL AND INDUSTRIAL TRAINING.

155. There was no change in the personnel of the Committee of Direction fo Technical and Industrial Training, Bombay, during the year under repor I continued to be the Chairman of the Committee.

156. Inspection.—The Inspector of Technical and Industrial Schools visite a number of schools and forwarded his inspection reports to the various schools fo their information and guidance.

157. Instruction.—The courses of instruction offered by these schools will be found in Appendix Q to this Report.

158. Examination.—Of the 2,226 candidates who appeared at the annual examinations held in April 1942, 1,758 or 78 per cent. were successful. Certificates were awarded to those who passed the final year examinations of the different courses.

159. Grant-in-aid.—The total amount expended on the recommendation of the Committee by way of recurring grants-in-aid during the year was Rs. 40,233 and the non-recurring grants amounted to Rs. 575-8-0. Particulars of grants made to the various institutions will be found in Appendix Q to this Report.

A recurring *pro-forma* grant-in-aid of Rs. 3,339 towards the rent of the Worli Chawl, occupied by the school, was made to the Narsingrao Shivaji Dharmji Industrial Home for the Blind, conducted by the Blind Relief Association.

160. Schools Recognised.—During the year the following two institutions were granted recognition :—

1. Abdulla Fazalbhoy Technical Institute attached to St. Xavier's College, Bombay.
2. Mahila Kala Bhuvan, Girgaum, Bombay 4.

161. Schools closed down.—The following schools were closed during the year :—

1. Byculla Municipal Central School, Byculla, Bombay.
2. Carpentry Class at Dahanu, District Thana.
3. Carpentry Class at Mokhada, District Thana.
4. Zarapkar Tailoring & Cutting Institute, Poona.

162. Miscellaneous.—Various enquiries in connection with the opening of new technical and Industrial classes from parties named below were received :—

1. General Education Society's Girls' High School, Dadar.
2. Industrial Classes run by the District Local Board, Andheri.
3. Sakshrata Prasarak Mandal, Ahmednagar.
4. People's Education Society, Ankola.
5. All India Kisan Sabha, Nadiad.
6. Thakar's High School, Ahmedabad.
7. Backward Class Committee, Nasik.
8. S. B. Radio Sales and Services, Bombay 4.

163. Expenditure.—Expenditure of the Committee during the year under report was as under :—

(1) Expenditure in connection with the Committee's staff borne on the establishment of the Department of Industries was Rs. 5,827-14-0.

(2) Expenditure in connection with the work of Inspection and examinations conducted by the Committee of Direction for Technical and Industrial Training, Bombay, was Rs. 11,424-4-9.

A sum of Rs. 1,753-7-0 was collected on account of examination fees, etc., and credited to Government.

THE VICTORIA JUBILEE TECHNICAL INSTITUTE, BOMBAY.

164. I continued to be the Chairman of the Board of management of the Institute.

The standard and number of courses offered by this Institute remained unchanged during the year.

Four hundred and seventy-six candidates applied for admission of whom 173 were admitted, 145 of these belonged to this Province.

The results of the final sessional examinations set out below indicate satisfactory progress :—

Courses.	Number of students who Appeared.	Passed.
Mechanical Engineering	41	36
Electrical Engineering	37	25
Textile Manufacture	22	20
Technical and Applied Chemistry	20	19
Sanitary Engineering and Plumbing	11	11

165. Miscellaneous Courses.—Miscellaneous courses offered by the Institute on Saturday mornings in elementary mechanical and electrical engineering, cotton spinning and weaving, electrical Wiremen's and electricians' work and the bi-weekly evening classes in elementary principles of radio communication, maintenance and repair of radio instruments, etc., continued to be attended by a large number of persons employed in different trades in the City of Bombay.

166. Expenditure.—The total expenditure during the year incurred by the Institute amounted to Rs. 2,78,289 of which Rs. 1,25,000 were as usual given by Government as grant-in-aid.

THE RANCHHODLAL CHHOTALAL TECHNICAL INSTITUTE, AHMEDABAD.

167. This is a Government institution. During the year under review 204 candidates applied for admission in different sections. Out of these 65 turned up for direct admission having passed the Matriculation or higher examinations and 97 appeared at the entrance examination. In all 72 new admissions were made, 32 being in Mechanical Engineering, 20 in Cotton Spinning and 20 in Cotton weaving.

The total number of students on the roll on 31st March 1943 was 94.

150 students appeared at the annual examinations in April 1942 of whom 108 passed.

4 out of 8 students of this Institute passed the various examinations of the City and Guilds Institute, London.

168. Wiremen's Classes.—26 students appeared at the annual examination conducted by the Committee of Direction for Technical and Industrial Training, Bombay. 16 of these were successful.

169. Expenditure.—The total expenditure during the year incurred by the Institutes was Rs. 33,457 and receipts were Rs. 3,297–14–0 as detailed in Appendix S.

GOVERNMENT TANNING INSTITUTE, BANDRA, BOMBAY 20.

170. Admission.—During the year, 41 applications for admission—14 for the Advanced and 27 for the Artisan Course—were received. 5 students were admitted to the Advanced Course and 20 students to the Artisan Course.

171. Examinations.—Final examinations of the session ending May 1942 were conducted by the Committee of Direction for Technical and Industrial Training and the results were as follows :—

Course.	Number of students who Appeared.	Passed.
Advanced II Year	5	5–II Class 3 Pass 2
Advanced I Year	4	4–II Class 2 Pass 2
Artisan	18	16–II Class 4 Pass 12

172. Scholarships.—All the artisan students were awarded a scholarship of Rs. 15 each per month. As only two scholarships were available for the Advanced Course, a competitive examination was held two months after the starting of the session and the first two in rank were awarded scholarships of Rs. 20 each per month.

173. Glue Manufacture.—The contract undertaken last year to supply glue to the Superintendent, Government Printing and Stationery was successfully completed at Rs. 44 per cwt. In addition to this a further quantity of one cwt. of glue was supplied to the Superintendent, Government Printing and Stationery at Rs. 125 per cwt. and also one cwt. of glue was sold at Rs. 140 per cwt. This experiment provided a splendid opportunity to the students to know how glue is manufactured. Total sale proceeds of glue amounted to Rs. 1,693–15–3.

174. Gelatine Manufacture.—Research is being conducted in connection with the manufacture of gelatine. Some twenty to twenty-five different samples of gelatine were produced under varying conditions and the results were noted. The experiments are in progress.

175. Advisory Committee of the Government Tanning Institute and Government Leather Working School.—One meeting of the above Committee was held during the year.

176. Receipts and Expenditure.—The total expenditure incurred by the Institute was 24,088–9–6 and the receipts were Rs. 10,308–7–6 as detailed in Appendix T.

THE GOVERNMENT LEATHER WORKING SCHOOL, BANDRA, BOMBAY 20.

177. Admissions.—During the year, 10 students were admitted to the Artisan and 3 to the Advanced Course. The total number of students on the roll at the close of the year under review was 10, of whom 1 was in the 2nd year Advanced, 1 in the 1st year Advanced and 8 were in the Artisan Courses.

178. Examinations.—Examinations were conducted by the Committee of Direction for Technical and Industrial Training, Bombay. During the year, 10 students appeared for examinations, one in the 1st year Advanced and 9 in the Artisan Course and all were declared to have successfully passed their examinations.

179. Scholarships.—Eight scholarships to the Artisan Course, 1 to the 1st year Advanced Course and 1 to the 2nd Year Advanced Course students all of the monthly value of Rs. 15 each were awarded during the year.

Additional scholarships which were received from Rural Development Boards of various districts were awarded to the students of the respective districts.

180. Receipts and Expenditure.—The total expenditure of the school was Rs. 14,377-12-3 and the receipts were Rs. 1,280-10-6 as detailed in Appendix U.

ELPHINSTONE TECHNICAL HIGH SCHOOL, BOMBAY.

181. The conversion of the Elphinstone High School into a Technical High School entered into the 2nd stage during the year under report.

Mr. C. L. Parmar was appointed as Engineering Superintendent in the School during the year.

182. Admissions.—The number of applications for admission to Standard IV Technical was small due to uncertain conditions prevailing in Bombay from April to July on account of the war scare. The number of students admitted was 35 as against the available accommodation for 60 students.

183. Scholarships.—Six scholarships in IV & V Technical Standards respectively of the monthly value of Rs. 7 each were awarded during the year.

It is gratifying to note that students on the whole have been displaying keen enthusiasm and liking for their work.

THE SCHOOL OF INDUSTRY, RATNAGIRI.

184. During the year under report a post of Assistant Superintendent was created for the School of Industry, Ratnagiri.

185. Admissions.—Twenty-six students were admitted to different courses during the year and the total number of students on roll at the end of the year was 81.

186. Examinations.—The Committee of Direction for Technical and Industrial Training, Bombay, conducted annual examinations with the following results :—

	Number of students who	
	Appeared.	Passed.
Trained Maistry	9	9
Carpentry	47	47
Mechanical Apprentice	5	5
Total ..	61	61

187. Scholarships.—Twelve Government scholarships and nine Ellis scholarships of Rs. 5 per month were awarded.

Expenditure.—Total expenditure of the school was Rs. 14,548-15-6 and the receipts were Rs. 3,019-11-3 as detailed in Appendix V.

GOVERNMENT APPRENTICE SCHEME.

188. The Progress of the scheme during the year under review and its present position may be judged from the following statistical summary :—

	1942-43	*Session*
	Bombay	Ahmedabad
(1) Number of applications received from candidates seeking admission to the Scheme	172	100
(2) Number of candidates who appeared for interview ..	155	73
(3) Number of apprentices allotted to mills and workshops ..	150	48

	Bombay.		Ahmedabad.	
	Mills.	Others.	Mills.	Others.
(4) Distribution of apprentices by textile mills and others ..	110	40	43	Nil.

	Bombay.	Ahmedabad.
(5) Number of co-operating establishments—		
Mills	27	22
Workshops	8	Nil.
Presses	5	Nil.
Chemical firms	1	Nil.

The following table will show the total number of apprentices under training at the close of the year :—

	Bombay.	Ahmedabad.
1st Year	94	51
2nd Year	53	25
3rd Year	40	28
4th Year	30	2
5th Year	19	5
Total ..	236	111

A new batch of 13 cadets of the Indian Marine Training Ship Dufferien was admitted to the evening classes of the Government Apprentice Scheme for theoretical training.

Some of the apprentices who completed the textile course were recruited by the Indian Stores Department as supervisors and assistant supervisors in Textile Mills.

SCHOLARSHIPS.

189. The following Government scholarships were awarded :—

(1) Government special scholarships tenable at the Victoria Jubilee Technical Institute, Bombay.—Out of the 10 scholarships available for award each year to the Intermediate and Backward classes and Muslims, 5 were awarded to the Intermediate class, 2 to Muslims and one to Backward class candidates.

(2) Scholarships in Technical Chemistry.—Out of the three scholarships awarded in 1941–42 for research work tenable at the Royal Institute of Science, Bombay, 2 were extended for further one year. Two new scholarships were awarded during the year—both tenable at the Royal Institute of Science, Bombay.

(3) Scholarships in Electrical Engineering.—The scholarship for practical training in Electrical Engineering awarded in 1941–42 terminated as it was sanctioned for one year only. One new scholarship was awarded during the year under report tenable at the Workshop of Messrs. Tata Sons Ltd.

(4) Scholarships and Free studentships to Backward Class students in Technical Schools.—During the year under report 4 scholarships tenable for three years, and five scholarships tenable for two years were awarded on the recommendation of the Backward Class Officer, Bombay Province, Poona.

CHAPTER XIX.

WEIGHTS AND MEASURES SECTION.

190. During the year under report, the enforcement of the Bombay Weights and Measures Act, 1932, was carried out satisfactorily throughout the Province by Government Inspecting Units. The work of verification, re-verification and stamping of traders' weights, measures, etc., together with inspection and surprise visits was done successfully.

191. Act and Rules—Exemptions.—After giving due consideration to the representations made by some of the industrial concerns, Government were pleased to exempt from the operation of the Bombay Weights and Measures Act weighing instruments used for mixing ingredients for personal information only in the—

(1) Sizemixing, bleaching, printing and calendering Departments of Textile Mills and factories.

NOTE.—Weighing instruments used for ascertaining the pre-determined weights of laps in blowrooms of textile mills and factories were also exempted.

(2) Manufacturing concerns and railway workshops.

192. Prosecutions.—During the year under report, about 500 cases were put up by the Inspectors of Weights and Measures from various Districts of the Province for prosecutions. Of these, 266 cases were selected and sanctioned for prosecution by this Department after considering the type, gravity and frequency of offences, and the nature of evidence available. 175 cases resulted in conviction. In 8 cases, the offenders were acquitted by the Court and the remaining 83 cases were pending trial in the Court.

193. Other Provinces and Indian States.—Government were pleased to agree to the request of the Mudhol State to allow them to get their working standards verified and stamped at Belgaum every year in the months of May and June when the Belgaum Government Inspectors verified their own sets of working standards against secondary standards kept at Belgaum treasury at a special *pro rata* fee of Rs. 75 instead of the usual fee of Rs. 100. Further the Mudhol State was also permitted to depute their officer to Bombay for receiving training in this Section on payment of a fee of Rs. 100.

The working standards of the Phaltan State were also re-verified and stamped in June, 1942, at Poona on payment of the fee of Rs. 100.

Enquiries were received from time to time from Baroda, Mysore, Hyderabad, Phaltan, Kolhapur and other Indian States, regarding the Bombay Weights and Measures Act, 1932, and the rules thereunder, and the required information was supplied to them. In February 1943, the Madras Government deputed their Deputy Warden of Weights and Measures to this Section for receiving necessary training for a period of two months.

194. Inspection tours.—During the year under review, the Warden and an Assistant Warden paid several inspection visits to the various Districts of the Province.

195. General—Thirty Inspectors of Weights and Measures continued the work of inspection of producer gas plants installed in the various districts of the Province, in addition to their work of verification and stamping of traders' weights and measures, etc.

Mr. P. G. Vidwans, officiating Senior Inspector of Weights and Measures, was on deputation in February 1943 last, to assist the Indian Stores Department, Aligarh, in connection with the maintenance of the weights and scales of the Indian Posts and Telegraphs Department.

196. Expenditure and Receipts.—The expenditure and receipts in connection with the enforcement of the Act during the financial year 1942-43, and the two preceding years were as follows :—

Year.	Expenditure.	Receipts.
	Rs.	Rs.
1940-41	1,56,880	3,23,528
1941-42	2,64,269	3,81,814
1942-43	2,22,670	4,30,329

CHAPTER XX.

ADMINISTRATION OF WAR TIME INDUSTRIAL CONTROLS.

197. The increasing scarcity of many raw-materials and consumers goods in the country and transport difficulties as a result of the war led the Government to institute many controls to regulate the distribution of the available supplies in a more equitable manner. The administration of the following controls was vested in this Department during the year : (1) Yarn Control, (2) Kerosene Control (Industrial Use), (3) Coal Distribution Scheme and (4) Producer Gas Plant. Below is given a short account of the working of these controls.

(1) YARN CONTROL.

198. The reasons necessitating control over the distribution of yarn were mentioned in the last year's report. It was there pointed out that the main object was to keep the speculator out of the yarn trade and assist the handloom weavers to get a regular supply of yarn at economic rates.

In March, 1942, the Government of Bombay issued a notification asking all the yarn dealers in the Province to submit to this Department a statement, in the prescribed form, of the stock of yarn held by them on 14th February, 1942. The returns received from the dealers were tabulated and a consolidated statement of the same was forwarded to Government for their information. Thereafter, according to the orders of Government 1,558 wholesale and 1,296 retail trading licenses were issued to *bona fide* parties for a period of six months in the first instance from 1st November 1942 to 30th April 1943. A condition of the license was that the dealers had to submit monthly reports of the stock of yarn held by them on the 1st of every month. These returns were tabulated in the monthly registers.

(2) KEROSENE CONTROL.

199. Developments in Burma and the shipping difficulties seriously affected the normal channels of kerosene supply in the country. With a view to conserve the existing stocks and supply the more essential needs of the country, Government instituted control over the distribution of kerosene. By a notification in the *Government Gazette* dated 16th July, 1942, the Government of Bombay were pleased to appoint the Director of Industries, Bombay, as the Controller of Kerosene (Industrial Use) for the purpose of granting permits to industrial concerns in Bombay City and the suburban District. Applications for permits for kerosene oil tenable for one calendar month were invited on prescribed forms. The applications were

carefully scrutinised by the Controller of Kerosene in consultation with a standing Committee of representatives of Kerosene Oil Companies and permits were granted to industrial concerns such as textile mills, engineering workshops, printing presses, paints manufacturing concerns, etc. Special concessions were also given to medical practitioners, educational institutions, etc.

The total number of applications dealt with from 16th July, 1942, to 31st March, 1943, was 22,805. Each month about 200 applications were investigated by Inspectors of Kerosene, appointed for the purpose of finding out the adequacy or otherwise of the quotas granted to the applicants in the beginning and to trace out bogus applications, if any. By 31st March nearly 200 bogus applications were traced and their permits were stopped. On an average about 2,500 permits were issued each month. No permits were issued by the Department to individual domestic consumers.

200. Steps to check Black-marketing.—With a view to check black marketing in kerosene the Government of Bombay prohibited, with effect from August, 1942, the sale of Kerosene except under a license granted by the Controller of Kerosene (Industrial Use). Licenses were issued to 102 shop-keepers and 136 hawkers under the Kerosene Licensing Order, 1942. The re-sale of kerosene except by a license was made an offence under the Defence of India Rules. All the Licensees in kerosene were required to furnish to the Controller of Kerosene weekly returns in respect of receipts, sales and stocks of kerosene oil.

201. Supply of kerosene for lighting purposes.—With a view to make kerosene available to industrial labourers and others for lighting purposes, the Controller invited applications from employers of labour and mutual stores for licenses under the Kerosene Licensing Order of 1942. During the year 255 such licenses were issued for supply of kerosene to about 1,06,000 families in Bombay City and the Suburban District. Taking an average of five persons per family about 5,30,000 members of the city's population living in areas where electricity is not available were served with kerosene through the various employers. Quotas for each establishment were fixed at the rate of ½ gallon per month per family of a worker employed by the concern in question.

For the administration of the scheme Government sanctioned the creation of a separate section in this Department. They were also pleased to sanction a separate post of an Assistant Controller of Kerosene (Industrial Use).

(3) PROVINCIAL COAL DISTRIBUTION SCHEME.

202. Due to transport congestion, the supply of coal to non-war and domestic consumers had to be provided for by means of priority supply. The general principles regulating the granting of priorities were laid down by the Controller of Coal Distribution, War Transport Department, Calcutta. Under the scheme the requirements of non-war industries and the domestic consumers fall under "J" class priority. Sanctions under this "J" class priority are issued by the Controller on the recommendations of the Provincial Controllers appointed by the local Governments for the purpose.

The scheme was put into effect in this Province on 1st January, 1943, and I was appointed the Provincial Controller. A quota of 600 (subsequently increased to 750) wagons was allotted to this Province. Applications in the prescribed forms were invited from dealers in coal and coke every month and after scrutiny recommendations were forwarded to the Coal Controller for final disposal. Two advisory committees, one for coal and the other for coke, have been set up to advise the Provincial Coal Controller in the general administration of the scheme.

203. A statement showing the number of wagons recommended by the Provincial Coal Controller during the three months of the year under review is given below :—

Month.	Dealers and Merchants.		Industries not on war work.		Domestic consumers.		Total.	
	Coal.	Coke.	Coal.	Coke.	Coal.	Coke.	Coal.	Coke.
January ..	319	161	185	52	2	1	506	214
February ..	254	134	142	66	1	3	397	203
March ..	215	122	211	49	1	..	427	171
Total ..	788	417	538	167	4	4	1,330	588

Due to acute wagon shortage not all the recommended wagons, however, were received by the consumers.

204. Control of Prices.—The question of fixation of control prices of coal and coke under the Scheme was under consideration at the close of the year. In the meantime, time was allowed to merchants and dealers to clear off their accumulated stocks by 1st April 1943. At the time of writing of this Report prices of Coal and Coke have been brought under control.

205. Restriction on Export of Coal.—With a view to conserving stocks of coal and coke in Bombay City, Government prohibited, with effect from 19th February 1943 the removal of coal by road or sea from any place within the limit of the City of Bombay and the Bombay Suburban District, except under a license granted by the Provincial Coal Controller, Bombay.

(4) PRODUCER GAS PLANT SCHEME.

206. The Producer Gas Plant Scheme was described at some length in the last year's report. During the year 1942-43, 29 manufacturers of producer gas plants submitted models of the plants manufactured by them for approval. Provisional certificates of approval were granted to them after examining the designs and carrying on road tests on the models. Of the 29 manufacturers 19 were from Bombay Province. Certificates of approval have so far been issued in respect of 54 models of producer gas plants submitted for test by various manufacturers.

With a view to encourage the manufacture of producer gas plants at reasonable prices, this Department recommended to the Steel Controller the names of certain manufacturers for obtaining priority steel at controlled rates. Government also sanctioned a scheme of granting loans to the owners of trucks for the purchase of approved producer gas plants. Motor vehicle owners took advantage of the offer and nearly Rs. 45,345 were sanctioned in loans by me. To further encourage the public to take to these plants, remission of taxation to the extent of 50 per cent. of the quarterly vehicle tax for a year was announced. The number of vehicles converted to producer gas in this Province increased from 487 on 31st May 1942 to 1,797 on 30th June 1943.

Rules and Regulations.—With a view to prevent the deterioration of the engine and to ensure safety to the public, the Department framed special rules for vehicles fitted with the producer gas plants, under the Indian Motor Vehicles Act, 1939. The rules were approved by the Government and are now in force in the Province.

207. Experimental Work.—Certain experimental work was undertaken with a view to improving producer gas plants keeping in mind the charcoal available in this Province. A reference in this connection is invited to Chapter II, on " Industrial Research and Practical Demonstrations".

CHAPTER XXI.

WORK OF THE DEPARTMENT—MISCELLANEOUS.

208. During the year the Department was engaged in various kinds of miscellaneous activities. The more important of these were : (1) Assistance to other Departments of Government, (2) Attendance at the meetings of Committees and Conferences, (3) Partaking in industrial exhibitions and museum administration, (4) Assistance in the scheme of training of Rural Assistants etc. Below is given a short account of these activities :—

(1) ASSISTANCE TO OTHER DEPARTMENTS OF GOVERNMENT.

209. (*i*) The Executive Engineer, Poona, requested the assistance of the Department in making plaster samples for drying hand-made paper produced at Erandol and Junnar. Investigations were undertaken and samples were sent to the Officer.

(*ii*) The Forest Department sent a number of samples of charcoal for testing their suitability as a producer gas plant fuel. A test report thereon was submitted to the Department.

(*iii*) On several occasions during the year the Secretary, Board of Transport, Bombay, requested the assistance of this Department in deciding the question of transport priorities for the movement of raw-materials and consumers' goods. Special investigations had to be undertaken for this purpose many a time.

(*iv*) The Commissioner of Excise, Bombay, wanted a substitute denaturant that would effectively denature rectified spirits. Experiments were conducted with varying mixtures of caoutchoucine and white kerosene. A suitable formula was recommended to the Commissioner.

(*v*) The Superintendent, Thana Jail, sent samples of ink blue powder for testing their serviceability in preparing ink. The samples were found to possess very low tinctorial contents. He was informed accordingly.

(*vi*) The Department carried out surprise checks of the articles in stock with the Superintendent, Government Printing and Stationery, Bombay. A report thereon was submitted to Government.

(*vii*) The Collector, Bombay Suburban District, requested the opinion of this Department about the advisability of allowing a soap factory to be located at a certain place in the District. The necessary advice was given.

(*viii*) The Superintendent, Government Printing and Stationery, Bombay, sent check samples of inks, type-writer oil, etc. for testing purposes. The test reports were forwarded to the Superintendent.

(2) CONFERENCES AND COMMITTEES.

210. (1) During the year, I attended (1) two meetings of the Central Post-War Reconstruction Committee, (2) the sixth Price Control Conference, (3) the sixth meeting of the Transport Advisory Council, all held in New Delhi, (4) the Provincial Rural Development Board meeting held in Poona, (5) the Conference called by the Controller of Coal Distribution, Government of India, held in Calcutta, (6) Backward Class Committee meetings called by the Commissioner, Central Division, in Nasik and Poona, (7) the monthly meetings of the Provincial Advisory Committee for war supplies in Bombay and (8) the monthly meetings of the Board of management of the Victoria Jubilee Technical Institute, Bombay, and the Committee of Direction for Technical and Industrial Training, of both of which I am the Chairman.

211. **District Rural Development Board Meetings.**—The meetings of the Rural Development Boards called by the Collectors of the different districts of the Province were attended by the respective officers of the Department nominated for the purpose. All possible assistance was given by the Department in connection with the rural development work.

212. **New Delhi Conference on Cashew Nut shell oil, etc.**—The problem of the export of cashew nut shell oil and kernels to U. S. A. was considered at a special conference at New Delhi convened by the Government of India. The Industrial Chemist of this Department attended the Conference as a representative of this Province. He emphasised the small-scale character of the Bombay industry and its inability tc compete with large producers such as those at Madras. Though the Government of India made some concessions to small producers, the localo undustr found itself unable to profit by the concession as the price offered for cashew niut shell oil was too low as compared with the prevailing costs of production.

(3) EXHIBITIONS.

213. The Department participated in the following exhibitions, shows, etc., during the year :—

(1) **The Agricultural Show organised by the Collector of Kolaba with the "Grow-more-food" week for Rabi crop at Wayshet in Alibag Taluka in October 1942.**—A coir demonstration on a small-scale was organised and sample of the coir articles turned out by the students of the demonstration were displayed.

(2) **District Agricultural Show organised by the District Rural Development Board, West Khandesh, at Dhulia in December 1942.**—Practical demonstrations in carpet weaving, newar weaving and shoe lace manufacture and in the methods of manufacturing different kinds of fibre articles were organised to demonstrate the great advantages of the improved methods of production. In addition, samples of hides and skins tanned by improved methods by the peripatetic tanning demonstration parties of the Department were exhibited along with those treated by the crude old methods. The advantages resulting from the improved methods and implements in the tanning industry were thus brought out. The Industrial Co-operative Association, Dhulia, and the Weaving School of the Department at Dhulia had also stalls at the show to display their handloom products.

(3) **Agricultural Show at Satara in January 1943.**—Samples of helves made of jungle wood were sent on loan to the Forest Utilization Officer, Bombay Province, Poona, for display in the Forest Products Section of the show organised by him at this place. It was emphasised that this was a new industry with great possibilities.

(4) **St. Philomena Fair Show organised by the Bassein Co-operative Glazed Wares Manufacturing Co-operative Society Ltd., at St. Michael's Church, Manickpur, District Thana.**—Articles such as tea pots cups and sugar basins, chutney sets, bowl sets, etc., produced at the Pottery Demonstration of the Department at Manickpur, near Bassein Road, were given to the Co-operative Society for display and sale on the pilgrimage day. The demonstration was kept open on that day, though it was a Sunday.

(5) **Agricultural and Industrial Show at Chandanpuri Fair in the Nasik District in February 1943.**—Samples of hides and skins tanned by the old methods and the improved methods of the tanning demonstration party at Vani, Nasik District, were exhibited. The advantages of the use of improved methods were duly emphasised.

In addition, small industrial shows were organised in June 1942, in connection with the District Rural Development Board meetings at Sholapur, Thana and Ahmedabad. The various official and non-official members of the Boards attending the meetings had thus an opportunity to see for themselves the progress made by the small-scale industries of the Province. The demonstration parties of the Department also partook in these activities. There was a good demand for textile and art-craft articles in the shows organised at Ahmedabad and Thana by the Cottage and Small Scale Industries Depot of the Department. The North Divisional Industrial Co-operative Association also participated in the show at Ahmedabad.

214. **Bombay and Poona Museums.**—The Industrial Chemist continued to attend the meetings of the Board of Trustees of the Lord Reay Industrial Museum, Poona. The bill referred to in the last year's report for reorganising the constitution of the Board of Trustees and placing the management of the institution on a statutory basis was drafted by this Department. It was forwarded to the Commissioner, Central Division, for his remarks.

On the recommendation of the Department, Government were pleased to sanction a sum of Rs. 1,500 as a grant-in-aid for the development of the Emporium conducted by the Museum authorities.

I continued to be a member of the Board of Trustees of the Prince of Wales Museum, Bombay, and attended some of its meetings.

(4) TRAINING OF RURAL ASSISTANTS.

215. The institution of a scheme for training rural assistants for doing rural development work at four centres in the Province viz., (1) Manjri, (2) Dhulia, (3) Devihosur and (4) Broach, was referred to in the last year's report. The peripatetic teaching parties with improved appliances and equipment continued to impart vocational training at the centres in : (*i*) agricultural carpentry and smithy, (*ii*) hand spinning, (*iii*) hand weaving, (*iv*) dyeing and printing, (*v*) coir and fibre work and (*vi*) cane and bamboo work.

Below is a short account of the work done at each of the centres during the year.

216. **Rural Assistant's Training Centre, Manjri.**—Theoretical and practical instructions were given in (1) cane and bamboo work and (2) agricultural carpentry and smithy from 1st May 1942, to 31st July 1942 in (1) hand weaving and (2) coir and fibre work from 1st August 1942, to 31st October 1942, and in (1) hand spinning and (2) dyeing and printing from 1st November 1942, to 31st January 1943. Forty-three rural assistants were trained in different crafts during the period.

217. **Rural Assistants' Training Centre, Dhulia.**—Thirty rural assistants received training at this centre in (1) hand-weaving, (2) coir and fibre work, (3) dyeing and printing, (4) cane and bamboo work and (5) carpentry and smithy.

218. **Rural Assistants' Training Centre, Devihosur.**—Training was imparted at this centre to thirty-two rural assistants in (1) hand spinning, (2) dyeing and printing, (3) coir and fibre work, (4) hand weaving, (5) cane and bamboo work and (6) carpentry and smithy.

The work at the three centres mentioned above was carried out in rotation by the peripatetic teaching parties organised for the purpose.

219. **Rural Assistants' Training Centre, Broach.**—Special staff had to be appointed at this centre for each craft for a period of three months as per the programme of training laid down. Thirty-five rural assistants were trained at this centre during the year in (1) carpentry and smithy, (2) hand spinning, (3) hand weaving, (4) dyeing and printing and (5) coir and fibre work.

On completion of the training at the different centres in January 1943, arrangements were made to give the rural assistants specialised training at the Village Industries Experimental Workshop, Poona, for a period of three months.

Five rural assistants trained under the above scheme were employed in this Department. Each of the District Industrial Officers of Belgaum and Nasik was given the assistance of two of these assistants. The remaining assistant was placed at the disposal of the District Industrial Officer, Surat.

(5) INTRODUCTION OF THE NUR IMDAD VEGETABLE OIL LAMPS IN VILLAGES.

220. The introduction of the Nur Imdad lamp in the villages of the Province was mentioned in the last year's report. It was there pointed out that these lamps have been found to be very suitable for burning vegetable oils, such as, groundnut oil, as illuminant in place of kerosene oil of which there is a shortage in the country. During the year under report, more than 6,000 of these lamps were distributed to villagers.

CHAPTER XXII.

STAFF AND EXPENDITURE.

(1) STAFF.

221. I held the post of the Director of Industries throughout the year under review. I was appointed as the Stores Purchasing Officer from May 1942. In addition, the charge of the post of the Yarn Commissioner also continued to be held by me for the whole year. I also worked as the Controller of Kerosene (Industrial Use) and Provincial Controller of Coal and Coke.

Mr. D. C. Gupta held the post of the Deputy Director of Industries throughout the year. He also held the charge of the post of the Assistant Stores Purchasing Officer from 27th May 1942 to 26th August 1942.

Mr. M. E. Haskell held the post of the Industrial Engineer throughout the year.

Dr. M. R. Mandlekar held the post of the Industrial Chemist throughout the year vice Dr. N. R. Damle whose services were lent to the Government of India from 31st December 1941.

Dr. S. B. Setna held the post of the Fisheries Officer throughout the year.

Mr. S. S. Rajagopalan held the post of the Personal Assistant during the year except from 2nd March 1943 onwards when he was on leave. He also held the charge of the post of the Assistant Controller (Coal and Coke) from 1st December 1942. During the leave period of Mr. Rajagopalan, Mr. S. Y. Anandkar, Head Clerk, officiated as my Personal Assistant.

Dr. S. M. Dhume held the post of the Officer-in-Charge, Commercial and Industrial Intelligence Section throughout the year.

Mr. D. N. Savkur, held the post of the Textile Expert and Designer throughout the year. He was also placed in charge of the scheme for the manufacture and supply of Handloom Textiles to the Supply Department with effect from 2nd December 1941.

Mr. R. U. Patel continued to hold the post of the Warden of Weights and Measures up to 26th August 1942, when he was appointed to the newly created post of the Assistant Stores Purchasing Officer. Mr. N. F. Mooraj, Assistant Warden of Weights and Measures, officiated as Warden of Weights and Measures vice Mr. Patel.

Mr. N. F. Mooraj continued to hold the post of the Assistant Warden of Weights and Measures up to 26th August 1942, when he was appointed to the post of Warden of Weights and Measures vice Mr. R. U. Patel. Mr. Mooraj also held the charge of the post of the Assistant Producer Gas Plant Engineer from 1st February 1942 to 7th February 1943. Mr. P. H. Dalal officiated as Assistant Warden of Weights and Measures vice Mr. Mooraj from 27th August 1942 to 25th November 1942 and Mr. V. M. Pednekar from 5th February 1943 onwards. Mr. V. V. Apte continued to hold the post of the Assistant Warden of Weights and Measures during the year except for the period from 16th September 1942 to 14th November 1942 when he was on leave. He also held the charge of the post of Assistant Producer Gas Plant Engineer from 8th February onwards.

Messrs. R. M. Marfatia, B. S. Kanvinde and N. R. Kembhavi held the posts of the District Industrial Officers, Surat, Nasik and Belgaum respectively throughout the year.

NEW APPOINTMENTS.

Mr. J. P. Nerurkar was appointed as Accounts Officer and he took charge of the post from 1st October 1942.

TOURING.

222. During the year under review, I, Deputy Director of Industries, Industrial Engineer, Industrial Chemist, Fisheries Officer, Warden and Assistant Warden of Weights and Measures, Textile Designer, Tanning Expert and the Accounts Officer toured throughout the Province as necessary.

VISIT TO WORKS.

223. The different officers of the Department visited various concerns in connection with different investigations and for rendering technical advice when necessary.

EXPENDITURE AND RECEIPTS.

224. The expenditure incurred by the Department of Industries during the last 5 years was as follows :—

	Rs.
1938–39	8,44,768
1939–40	9,92,638
1940–41	8,98,701
1941–42	14,71,673*
1942–43	12,07,233

*(In this total is included a sum of Rs. 4 lakhs sanctioned by Government in connection with the scheme for the supply of handloom goods to the Supply Department. The expenditure of the Department as such was Rs. 10,71,673.)

The above figures are exclusive of the expenditure on such activities as the marketing of handloom products and the wool scheme referred to in Chapter XI. These activities were financed from the funds placed at the disposal of the Government of Bombay by the Government of India and expenditure thereon during the year was as under :—

	Rs.
(1) Marketing of Handloom Products (Cotton)	40,942
(2) Wool Scheme	20,634

Thus the total expenditure of the Department excluding *loans and subsidies* was Rs. 12,68,809.

225. The total receipts during the year amounted to Rs. 6,41,452 as shown below :—

	Rs.
(1) Fees collected by Government Inspectors of Weights and Measures	4,32,015
(2) Fees from Fish Curing Yards	1,36,711
(3) Receipts on account of other activities	72,726
Total ..	6,41,452

226. The Department had another very busy year. Apart from the usual increase in the departmental activities, the work undertaken on account of the exigencies of the war was very considerable and often strained the resources of the Department almost to the breaking point. The fact that it was very difficult to secure trained men and hence untrained men have had to be engaged in connection with the new activities of the Department added much to the pressure and strain on the various officers and their existing experienced staff. I am glad to be able to record once again that all the staff shouldered their responsibilities very willingly and well.

P. B. ADVANI,

Bombay, 1st October 1943. Director of Industries.

APPENDIX A.

Expenditure on and Receipts from Peripatetic Handloom Weaving and Dyeing Institutions for the year 1942–43.

Credits. Particulars.	Amount.	Debits. Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
1. Sale proceeds of articles ..	274 14 11	1. Pay of Officers ..	....
2. Fees from students* ..	....	2. Pay of establishment i.e., Weaving Assistants Masters, Demonstrators, etc. ..	24,412 12 0
3. Miscellaneous ..	....	3. Wages of Workmen ..	35 0 0
		4. Allowances and Honoraria ..	2,645 3 0
		5. Dearness Allowance ..	1,539 13 0
		6. Stores Purchase ..	3,415 0 1
		7. Other Miscellaneous expenses ..	3,786 12 0
Total ..	274 14 11	Total ..	35,834 8 1

*Instruction is imparted free of charge.

APPENDIX B.

Expenditure on and receipts from the Government Hand Weaving Institute, Poona, for the year 1942–43.

Credit. Particulars.	Amount.	Debit. Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
1. Sale proceeds of articles ..	275 0 0	1. Pay of officers ..	....
2. Fees from students* ..	....	2. Pay of establishment i.e., temporary staff etc. ..	7,010 10 0
3. Miscellaneous ..	....	3. Wages of workmen ..	....
		4. Allowances and Honoraria ..	125 14 0
		5. Dearness allowance ..	274 0 0
		6. Scholarships ..	853 13 0
		7. Stores and Machinery purchased	2,811 10 9
		8. Other miscellaneous expenses ..	2,800 10 0
Total ..	275 0 0	Total ..	13,876 9 9

*Instruction is imparted free of charge.

APPENDIX C.

Expenditure on and receipts from the Tanning Demonstration parties during the year 1942-43.

Credit. Particulars.	Amount.	Debit. Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
1. Sale proceeds of tanned hides and skins ..	217 14 0	1. Pay of officers ..	3,185 0 0
2. Fees from students ..	....	2. Pay of establishment i.e., wages of workmen ..	5,509 9 0
3. Miscellaneous ..	....	3. Allowances and Honoraria ..	563 8 0
		4. Dearness allowance ..	560 10 0
		5. Stores purchased ..	313 3 0
		6. Miscellaneous and other expenditure ..	1,271 6 6
		7. Grant-in-aid ..	349 14 0
Total ..	217 14 0	Total ..	11,753 2 6

APPENDIX D.

Results of Silk Worm Rearings—Crop No. 20 to Crop No. 183—during 1942-1943.

Crop No.	Name of variety.	Month during which reared	Quantity of D. F. Layings	Total days taken for crop	Yield in Lbs.	Yield in Tolas	Yield for 100 D. F. layings	Number of raw cocoons per lb.
1	2	3	4	5	6	7	8	9
20	Pure Mysore (local from crop 11)	March April.	2	29	..	34	42·5	650
21	Mysore × C. Nichi	Do.	5	25	2	37	58·5	510
22	Nismo (from Bengal)	Do.	2	25	1	20	75	480
23	Nichi 107 (local from Crop 14) Pure	April May.	5	24	3	..	60	490
24	Nichi × Nistid (local from Crop 14 × 13)	Do.	2	22	1	8	60	440
25	Nistid × Mysore Japanese (local Crop 13 × 15)	Do.	2	23	1	20	75	420
26	Nistid (from Crop 13)	Do.	10	25	6	..	60	490
27	Mysore Japanese F 1 × Nistid (local from Crop 15 × 13)	Do.	5	25	3	..	60	510
28	Mysore Japanese F 2 (local from Crop 15)	Do.	5	25	3	15	67·5	460
29	Mysore C. Nichi (from Mysore)	Do.	10	24	6	..	60	500
30	Nismo × Mysore Japanese F2 (from Crop 17)	Do.	5	24	3	30	75	430
31	Mysore Japanese × Nismo (From Crop 18)	April May.	5	23	3	30	75	425
32	Nismo (local from Crop 19)	Do.	15	24	12	..	80	440
33	Pure Mysore (local from Crop 16)	Do.	5	27	2	10	52·5	560
34	Nismo × Mysore (local from Crop 19 × (16)	Do.	5	25	4	..	80	450
35	Pure Mysore (local from Crop 20)	May	5	25	3	20	70	530
36	Mysore Japanese (local From Crop 21)	Do.	2	23	1	24	80	480
37	Nismo (Local from Crop 22)	May June.	10	25	6	..	60	485
38	Japanese × Nistid F 2 (local from Crop 24 Yellow)	Do.	6	21	4	8	70	410
39	Japanese (local from Crop 23)	Do.	5	21	3	5	62·5	450
40	Japanese Nistid × Japanese (local from Crop 24 × (23 yellow)	Do.	2	21	1	20	75	430
41	Nistid × Mysore Japanese F 2 (local from Crop 25 yellow)	Do.	2	22	1	24	80	410
42	Japanese × Nistid Mysore Japanese (local from Crop 23 × 25)	Do.	1	22	..	22	55	440
43	Nistid (local from Crop 26)	Do.	5	22	3	..	60	418
44	Mysore Japanese F 3 (local from Crop 28)	Do.	2	24	1	16	70	400

45	Nismo Mysore Japanese × Mysore Japanese Nismo (local from Crop 30 × 31)	May	2	24	1	8	60	400
		June.						
46	Mysore Japanese Nismo (local from Crop 31 Green)	Do.	2	25	1	24	80	420
47	Nismo Mysore Japanese F 2 (yellow from Crop 30)	Do.	2	24	1	24	80	400
48	Mysore Japanese Nismo × Nismo Mysore Japanese (local from Crop 31 × 30)	Do.	2	24	1	8	60	440
49	Mysore Japanese F2 × Nismo Mysore Japanese (local from 28 × 30)	Do.	2	25	1	16	70	420
50	Mysore Japanese F2 × Mysore Japanese Nismo (local from 28 × 31)	Do.	1	25	..	30	75	400
51	Mysore Nismo F2	Do.	5	245	2	20	50	400
52	Nismo Mysore F2 (local from Crop 34)	Do.	5	29	3	..	60	400
53	Nismo (local from Crop 32)	June	5	27	2	..	40	440
54	Pure Mysore (local from Crop 33)	June	5	29	2	10	45	480
		July.						
55	Mysore Cross F3 (local from Crop 36 white)	Do.	2	25	1	12	65	460
56	Pure Mysore (local from Crop 35)	Do.	2	28	1	..	50	500
57	Nismo (local from Crop 37)	Do.	4	27	1	28	42·5	480
58	Nistid Mysore Japanese F3 (local from Crop 41)	July	2	26	1	20	75	520
		August.						
59	Japanese Nistid F3 (local from Crop 38)	July	2	25	1	..	50	500
60	Japanese Nistid × Japanese F2 (local from Crop 40)	July	2	25	1	12	65	440
61	Japanese × Nistid Mysore F2 (local from Crop 42)	July	2	26	1	20	75	460
		August.						
62	Japanese (local from Crop 39)	Do.	2	25	1	10	62·5	440
63	Nistid (local from Crop 43)	Do.	4	25	2	18	61·25	480
64	Nismo Mysore Japanese × Mysore Japanese Nismo (Yellow from Crop 45)	Do.	1	29	..	19	47·5	520
65	Mysore Japanese Nismo F4 (Green from Crop 46)	Do.	1	28	..	20	50	480
66	Nismo Mysore Japanese (Yellow from Crop 47)	Do.	1	27	..	22½	66·25	500
67	Mysore Japanese F4 (Green from Crop 44)	Do.	1	31	..	24	60	420
68	Mysore Japanese F2 × Mysore Japanese Nismo F2 (Green from Crop 50)	Do.	1	30	..	23	57·50	460
69	Mysore Japanese Nismo × Nismo Mysore Japanese (Green from Crop 118)	Do.	1	29	..	24	60	480
70	Mysore Japanese F2 × Nismo Mysore Japanese F2 (Yellow from Crop 49)	Do.	1	27	..	24	60	480
71	Mysore Nismo F3 (Green from Crop 51)	Do.	1	28	..	22	55	520
72	Nismo Mysore (Yellow from Crop 52)	Do.	1	33	..	20	50	440
73	Nismo (local from Crop 53)	July	2	33	1	8	60	440
		August.						
74	Pure Mysore (local from Crop 54)	Do.	1	31	..	20	50	500
75	Pure Mysore (local from Crop 56)	August	2	27	1	8	60	490
		September						
76	Mysore Japanese F4 (from Crop 55)	Do.	2	27	1	24	80	440
77	Nismo (local from Crop 57)	Do.	2	29	1	12	65	460
78	Japanese × Nistid F4 (Yellow Crop 59)	Do.	5	26	4	..	80	440
79	Japanese Nistid × Japanese F3 (Yellow Crop 60)	Do.	5	26	4	10	85	440
80	Nistid × Mysore Japanese F4 (Green from Crop 58)	Do.	5	27	3	..	60	480
81	Japanese × Nistid Mysore F3 (Green from Crop 61)	Do.	3	26	2	10	75	440
82	Japanese × Nistid Mysore F3 (white from Crop 61)	Do.	5	26	2	32	56	480
83	Nismo (from Bengal)	Do.	5	28	2	20	50	500

APPENDIX D—*contd.*

Crop No.	Name of variety	Month during which reared	Quantity of D. F. Layings	Total days taken for crop	Yield in Lbs.	Yield in Tolas	Yield for 100 D. F. layings.	Number of raw cocoons per lb.
1	2	3	4	5	6	7	8	9
84	Japanese (local from Crop 62)	August September	1	24	..	28	70	400
85	Nistid (local from Crop 63)	Do.	5	27	2	32	56	560
86	Nistari	September October.	5	26	2	1	40·5	600
87	Nismo Mysore Japanese × Mysore Japanese Nismo F3 (from Crop 64)	Do.	2	26	1	..	50	460
88	Mysore Japanese Nismo F3 (Green from Crop 65)	Do.	2	25	1	..	50	460
89	Nismo Mysore Japanese F5 (Yellow from Crop 66)	Do.	1	30	..	20	50	460
90	K Nichi 110 (Japanese)	Do.	5	26	3	30	75	440
91	Mysore × Japanese	Do.	5	30	2	11	52·5	400
92	Pure Mysore	Do.	5	30	2	30	55	520
93	Mysore Japanese F5 (Green from Crop 67)	Do.	2	27	1	20	75	420
94	Mysore Japanese F2 × Mysore Japanese Nismo (from Crop 68) (Green)	Do.	2	27	1	6	67·5	460
95	Mysore Japanese Nismo × Nismo Mysore Japanese (Green from Crop 69)	Do.	2	27	1	..	50	480
96	Mysore Japanese F2 × Nismo Mysore Japanese F2 (Yellow from Crop 70)	Do.	2	27	1	8	60	440
97	Mysore × Nismo F4 (Green from Crop 71)	Do.	1	33	..	30	75	420
98	Nismo (from Crop 73)	Do.	4	32	2	20	62·5	500
99	Nismo × Mysore F4 (Yellow from Crop 72)	Do.	2	32	1	..	50	440
100	Pure Mysore (local from crop 74)	Do.	1	32	..	27	67·5	540
101	Mysore Cross F5 (local from Crop 76)	Do.	5	28	2	32	56	480
102	Nismo (local from Crop 77)	October November	10	29	5	..	50	540
103	White Nistid F5 (from Crop 78)	Do.	5	27	3	30	75	500
104	Japanese Nistid Japanese F4 (Yellow from Crop 79)	Do.	5	27	2	20	50	480
105	Japanese Nistid Mysore (Green from Crop 81)	Do.	10	27	6	..	60	420
106	Japanese Pure (from Crop 84)	Do.	15	28	7	20	50	400
107	Japanese Nistid Mysore F4 (white from Crop 82)	Do.	5	28	3	2	61	480
108	Nistid Mysore Japanese F5 (Green from Crop 80)	Do.	5	27	3	..	60	480
109	Nismo (from Crop 83)	Do.	10	27	6	5	61·25	480
110	Nistid (from Crop 85)	Do.	15	28	11	..	73	475
111	Nistari (from Crop 86)	Do.	5	28	2	30	55	575
112	Mysore Japanese Nismo F6 (from Crop 88)	Do.	10	30	6	8	62	500
113	Nismo Mysore Japanese × Mysore Japanese Nismo (from Crop 87)	Do.	10	30	5	14	53·5	445
114	Mysore Cross (from Crop 91)	Do.	1	29	..	33	80	440
115	Mysore Japanese Nismo × Nismo Mysore Japanese (Green from Crop 75)	Do.	7	30	4	36	70	420
116	Mysore Pure (local from Crop 92)	Do.	10	35	5	35	58·75	508

117	(Mysore Japanese × Mysore Japanese Nismo) × (Mysore Japanese Nismo × Nismo Mysore Japanese) (local from Crop 94 × 95).	Do.	2	36	1	25	80	480
118	(Mysore Japanese × Mysore Japanese Nismo) × (Mysore Japanese F5) (from Crop 94 × 93).	Do.	2	36	1	12½	65·5	480
119	Mysore × Mysore Japanese F5 (from Crop 92 × 93)	Do.	2	31	1	20	75	430
120	Mysore Japanese F6 (Green from Crop 93)	Do.	2	33	1	17	75·25	440
121	Mysore Japanese × Mysore Japanese Nismo (Green from Crop 94)	November December.	2	35	1	4	55	480
122	Mysore Japanese × Nismo Mysore Japanese (Yellow from Crop 96)	Do.	10	33	6	13	63	448
123	Nismo × Mysore F5 (Yellow from Crop 99)	Do.	4	36	2	25	65	440
124	Pure Mysore (from Crop 100)	Do.	4	37	2	10	56	560
125	Mysore Cross (from Crop 101)	Do.	5	34	3	20	70	480
126	Nismo (from Crop 102)	January, 1943.	2	34	1	22	75·5	460
127	Japanese Nistid Japanese × Japanese (from Crop 104 × 106)	Do.	2	34	1	13	66	550
128	Japanese Nistid × Japanese F5 (from Crop 104) (Yellow)	Do.	2	33	..	38	48	490
129	Japanese (from Crop 106)	Do.	4	37	2	3	52	500
130	(Japanese × Nistid Mysore F4) × Japanese (from Crop 105 × 106)	December 1942 to January 1943.	2	36	1	15	69	480
131	White × Nistid (Yellow from Crop 103) F6	Do.	2	34	1	11	63·75	440
132	Japanese Nistid Mysore (from Crop 105) Marked	Do.	4	36	2	35	72	440
133	Japanese Nistid Mysore × Japanese (from Crop 107 × 106)	Do.	2	37	1	20	75	500
134	Nismo × Japanese (from Crop 109 × 106)	Do.	2	34	1	15	69	600
135	Nistid × Mysore Japanese F6 (from Crop 108) Green	Do.	2	35	1	7	59	500
136	Nismo (from Crop 109)	Do.	3	35	2	4	70	480
137	Japanese Nistid Mysore F5 (from Crop 107)	Do.	2	37	1	11	63·75	480
138	Japanese Nistid × Japanese F5 (from Crop 104). Yellow	Do.	2	33	1	12	65	480
139	Japanese Nistid Mysore × Japanese (from 105 × 106)	Do.	2	33	1	15	69	460
140	Japanese (from Crop 106)	Do.	3	33	1	37	64	480
141	Japanese × Nistid Mysore F5 (from Crop 105)	Do.	2	33	1	25	80	480
142	Nistid (from Crop 110)	Do.	2	33	1	12	65	480
143	Nistari (from Crop 111)	Do.	2	33	1	4	55	540
144	White Nistid F6 (from Crop 103). Yellow	Do.	2	33	1	24	79	460
145	Nismo (from Crop 109)	Do.	3	32	2	12	76	560
146	Nistid (from Crop 110)	Do.	1	33	..	30	75	490
147	Mysore Japanese × Nismo (from Crop 112) Green	Do.	2	32	1	10	62·5	440
148	Mysore Cross (from Crop 114)	Do.	2	31	1	13	65	480
149	Nismo Mysore Japanese × Mysore Japanese Nismo (from Crop 113)	Do.	2	30	1	3	53	570
150	Mysore Japanese Nismo × Nismo Mysore Japanese F4 (from Crop 115) Green	Do.	2	32	1	20	75	460
151	Mysore Pure (from Crop 116)	Do.	2	34	1	..	50	440

APPENDIX D—*concld.*

Crop No.	Name of variety	Month during which reared	Quantity of D. F. Layings	Total days taken for crop	Yield in Lbs.	Yield in Tolas	Yield for 100 D. F. layings	Number of raw cocoons per lb.
1	2	3	4	5	6	7	8	9
152	Mysore Japanese F2 × Nismo Mysore Japanese F2 (from Crop 122)	December 1942 to January 1943.	3	35	1	30	58	520
153	Nismo × Mysore F6 (from Crop 123)	January February 1943	2	34	1	21	75	460
154	Mysore Cross (from Crop 125)	Do.	2	36	1	11	63	480
155	Mysore Pure (from Crop 124)	Do.	2	40	1	..	50	440
156	Japanese Nistid Japanese × Japanese F2 (from Crop 127)	February March.	2	35	1	9	61	480
157	Japanese Nistid × Japanese F6 (from Crop 128)	Do.	2	35	1	10	62·5	460
158	Japanese (from Crop 129)	Do.	3	39	1	36	63	470
159	Nismo (from Crop 126)	Do.	2	40	1	3	53	500
160	Japanese Nistid Mysore × Japanese F2 (from Crop 130). White	Do.	2	40	1	16	70	440
161	Japanese × Nistid Mysore (from Crop 132 F6 Green unmarked)	Do.	2	37	1	2	52·5	490
162	Nismo × Japanese (from Crop 134)	Do.	2	39	1	27	83·75	496
163	Japanese Nistid Mysore × Japanese (from Crop 133). White	Do.	2	38	..	38	47·5	575
164	Japanese × Nistid Mysore F6 (from Crop 32) Green Marked	Do.	2	40	1	23	79	440
165	White Nistid (from Crop 131) Yellow	Do.	2	36	1	20	75	440
166	Nistid Mysore Japanese F7 (from Crop 135)	Do.	2	38	1	2	52	500
167	Nismo (from Crop 136)	Do.	2	39	1	5	56	520
168	Japanese × Nistid Mysore (from Crop 137) F6	Do.	1	37	..	31	77·5	440
169	Japanese Nistid × Mysore F6 (from Crop 139) Yellow	Do.	2	32	..	..	..	..
170	Japanese Nistid Mysore Japanese (from Crop 138) White	Do.	2	36	1	15	69	440
171	Japanese (from Crop 140)	Do.	2	38	1	21	75	460
172	Japanese Nistid Mysore F6 (from Crop 141 Green)	Do.	2	38	1	22	75·5	440
173	Nistid (from Crop 142)	Do.	2	35	..	32	40	550
174	Nistari (from (Crop 143)	Do.	2	37	..	34	42	520
175	White × Nistid from (Crop 144 F7)	Do.	2	40	1	5	56	480
176	Nismo (from Crop 145)	Do.	2	36	1	17	70	480
177	Nistid (from Crop 146)	Do.	2	35	1	5	56	500
178	Mysore Japanese × Nismo F8 (from Crop 147 Green)	Do.	2	33	1	25	80	440
179	Mysore Cross (from Crop 148)	Do.	2	35	1	31	89	420
180	Nismo Mysore Japanese × Mysore Japanese Nismo F6 (from Crop 149) Yellow	Do.	2	34	1	21	75	440
181	Mysore Japanese Nismo × Nismo Mysore Japanese (Green from Crop 150)	Do.	2	32	1	21	75	440
182	Mysore Pure (from Crop 151).	Do.	2	35	..	37	47	540
183	Mysore Japanese F2 × Nismo Mysore Japanese F2 (from Crop 152) Yellow	Do.	2	35	1	19	69	440

APPENDIX E.

Expenditure on and Receipts from the Cane and Bamboo Work Demonstration for the year 1942–43.

Credit.		Debit.	
Particulars.	Amount.	Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
1. Sale proceeds of articles ..	175 9 0	1. Pay of officers	....
2. Fees from students	....	2. Pay of establishment ..	988 10 0
3. Miscellaneous	....	3. Wages of workmen ..	....
		4. Allowances and Honoraria ..	24 9 0
		5. Dearness allowance ..	315 14 0
		6. Scholarships and prizes ..	500 14 0
		7. Stores purchased	582 0 9
		8. Other miscellaneous expenses ..	231 11 3
Total ..	175 9 0	Total ..	2,643 14 0

APPENDIX F.

Expenditure on and Receipts from the lacquer work Demonstration for the year 1942–43.

Credit.		Debit.	
Particulars.	Amount.	Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
1. Sale proceeds of articles ..	65 8 0	1. Pay of Officers	....
2. Fees from students ..	....	2. Pay of establishment ..	1,105 0 0
3. Miscellaneous	....	3. Wages of workmen ..	179 6 0
		4. Allowances and Honoraria ..	51 8 0
		5. Dearness allowance ..	82 0 0
		6. Scholarships and Prizes ..	553 9 0
		7. Stores purchased	168 1 6
		8. Other miscellaneous expenses ..	580 7 6
Total ..	65 8 0	Total ..	2,720 0 0

APPENDIX G.

Expenditure on and Receipts from the Coir Manufacture School for the year 1942–43.

Credit. Particulars.	Amount.	Debit. Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
1. Sale proceeds etc.	201 3 10	1. Pay of Officers	....
2. Fees from students	....	2. Pay of Establishment, i.e. Coir Supervisor, Weaving-masters etc.	1,193 1 0
3. Miscellaneous	....	3. Wages of workmen.. ..	....
		4. Allowances and Honoraria ..	281 0 0
		5. Dearness allowance ..	94 0 0
		6. Scholarships and prizes ..	419 12 0
		7. Stores purchased	197 10 0
		8. Other Miscellaneous expenses ..	436 12 9
Total ..	201 3 10	Total ..	2,622 3 9

APPENDIX H.

Expenditure on and Receipts from the Coir Rope and Brush Making Demonstration for the year 1942–43.

Credit. Particulars.	Amount.	Debit. Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
1. Sale Proceeds, etc.	147 1 9	1. Pay of Officers	....
2. Fees from students	....	2. Pay of Establishment ..	420 0 0
3. Miscellaneous	....	3. Wages of workmen ..	....
		4. Allowances and Honoraria ..	83 0 0
		5. Dearness allowance ..	105 8 0
		6. Scholarships and prizes ..	363 0 0
		7. Stores purchased	146 14 9
		8. Other Miscellaneous expenses.	254 10 0
Total ..	147 1 9	Total ..	1,373 0 9

APPENDIX I.

Expenditure on and receipts from the Soft and Hard Fibre Extraction Demonstration for the year 1942–43.

Credit. Particulars.	Amount.	*Debit.* Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
Sale Proceeds of articles ..	329 5 3	1. Pay of Officers	....
Fees from students	....	2. Pay of Establishment ..	865 1 0
Miscellaneous	....	3. Wages of workmen ..	....
		4. Allowances and Honoraria ..	15 12 0
		5. Dearness Allowance ..	94 8 0
		6. Scholarships	439 15 0
		7. Stores purchased	85 0 0
		8. Other Miscellaneous expenses ..	219 8 0
Total ..	329 5 3	Total ..	1,719 12 0

APPENDIX J.

Expenditure on and Receipts from the Pottery Demonstration for the year 1942–43.

Credit. Particulars.	Amount.	*Debit.* Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
Sale proceeds of articles ..	*Nil.*	1. Pay of Officers	....
Fees from students* ..	....	2. Pay of Establishment ..	3,109 3 0
Miscellaneous	....	3. Wages of workmen	....
		4. Allowances and Honoraria† ..	1,464 13 0
		5. Dearness Allowance ..	133 0 0
		6. Stores purchased ..	4,679 9 0
		7. Scholarships and prizes ..	665 14 0
		8. Other miscellaneous expenses ..	1,013 13 0
Total ..	....	Total ..	11,066 4 0

*Instruction is imparted free of charge.

†This includes honorarium to the Pottery Consultant.

APPENDIX K.

Expenditure on and Receipts from the Boot and Shoe Lace, File Strings, Carpet Weaving etc., School.

Credit.		Debit.	
Particulars.	Amount.	Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
1. Sale Proceeds of articles ..	....	1. Pay of Officers	....
2. Fees from Students* ..	....	2. Pay of Establishment ..	837 12 0
3. Miscellaneous	....	3. Wages of workmen ..	....
		4. Allowances and Honoraria ..	62 15 0
		5. Dearness allowance ..	106 0 0
		6. Scholarships	418 5 0
		7. Stores Purchased	525 0 0
		8. Other miscellaneous expenses ..	932 1 6
Total ..	....	Total ..	2,882 1 6

*Instruction is imparted free of charge.

APPENDIX L.

Statement showing Membership, Capital, Advances, from Government and Loans from Bank, relating to different Associations under the Marketing Scheme for Handloom Products (Cotton).

Name of the Association.	Membership as on		Share capital as on		Advances from Government for capital as on		Loans from Bank as on	
	31st March 1942	31st March 1943	31st March 1942	31st March 1943	31st March 1942	31st March 1943	31st March 1942	31st March 1943
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
North Central Divisional Industrial Co-operative Association, Ltd., Ahmednagar.	528	542	1,716 3 0	1,768 11 0	12,000 0 0	38,700 0 0	12,148 12 7	21,297 1 11
The Southern Divisional Industrial Co-operative Association, Ltd., Hubli.	293	346	1,514 0 0	1,552 0 0	10,000 0 0	10,000 0 0	6,429 13 9	9,621 13 0
The Northern Divisional Industrial Co-operative Association, Ltd., Ahmedabad.	387	564	1,528 0 0	2,306 0 0	8,000 0 0	8,000 0 0	21,516 10 0	16,853 6 6
The Sholapur District Industrial Co-operative Association, Ltd., Sholapur	425	622	11,821 4 6	15,586 4 6	11,125 0 0	20,025 0 0	25,972 12 6	90,103 7 7
The Industrial Co-operative Association, Ltd., Yeola, District Nasik	331	727	5,310 0 0	6,488 0 0	*Nil.*	20,025 0 0	21,392 3 9	1,02,825 1 3
The Industrial Co-operative Association, Ltd., Malegaon, District Nasik	274	314	2,682 0 0	2,848 6 0	6,309 7 3	10,920 4 0	14,892 10 0	*Nil.*
The Bijapur District Industrial Co-operative Association, Ltd., Kamatgi	405	458	2,526 0 0	2,786 0 0	4,500 0 0	4,500 0 0	14,072 15 2	863 14 6
The Industrial Co-operative Association, Ltd., Belgaum	312	238	2,546 0 0	2,592 0 0	4,347 8 0	5,650 0 0	4,588 1 0	9,996 10 10
The Khandesh District Industrial Co-operative Association, Ltd., Dhulia, District West Khandesh	190	160	2,042 0 0	2,160 8 0	5,000 0 0	9,450 0 0	3,393 12 9	*Nil.*
	3,145	3,971	31,685 7 6	38,087 13 6	61,281 15 3	1,27,270 4 0	1,24,407 11 6	2,51,561 7 7

APPENDIX M.

Statement showing sales of raw materials, finished products, gross profits, etc., under the Marketing Scheme for Handloom Products (Cotton).

Name of the Association.	Sales.							
	Raw Materials.		Finished Products.		Total.		Gross Profits.	
	1941–42	1942–43	1941–42	1942–43	1941–42	1942–43	1941–42	1942–43
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
North Central Divisional Industrial Co-operative Association, Ltd., Admednagar	7,798 11 6	2,58,481 1 0	8,857 15 0	2,79,052 6 9	16,656 10 6	5,37,533 7 9	1,780 7 6	7,693 6 6
The Southern Divisional Industrial Co-operative Association, Ltd., Hubli	25,792 6 9	87,396 0 6	27,585 2 0	57,899 8 11	53,377 8 9	1,45,295 9 5	1,668 0 9	9,095 7 3
The Northern Divisional Industrial Co-operative Association, Ltd., Ahmedabad	24,118 3 3	24,786 7 6	31,530 7 0	51,742 13 3	55,648 10 3	76,529 4 9	3,844 13 6	5,703 0 0
The Sholapur District Industrial Co-operative Association, Ltd., Sholapur	1,14,919 12 3	5,83,838 7 0	96,860 13 9	5,87,138 11 1	2,11,780 10 0	11,70,977 2 1	19,127 11 6	43,979 15 2
The Industrial Co-operative Association, Ltd., Yeola, District Nasik.	35,487 11 0	2,50,812 4 6	29,341 14 3	1,82,828 4 0	64,829 9 3	4,33,640 8 6	3,600 4 3	3,710 1 11
The Industrial Co-operative Association, Ltd., Malegaon, District Nasik	26,389 11 9	38,980 6 9	16,146 12 0	62,903 7 9	42,536 7 9	1,01,883 14 6	1,918 6 6	21,555 11 3
The Bijapur District Industrial Co-operative Association, Ltd., Kamatgi	5,622 4 0	26,568 10 6	8,873 14 2	17,986 14 9	14,496 2 2	44,555 9 3	2,610 15 0	10 9 9 (Loss).
The Industrial Co-operative Association, Ltd., Belgaum	5,188 1 6	8,445 7 3	14,227 8 6	24,376 14 3	19,415 10 0	32,822 5 6	355 0 0	5,000 0 0
The Khandesh District Industrial Co-operative Association, Ltd., Dhulia, District West Khandesh	11,046 13 3	32,645 14 9	25,267 9 0	21,606 6 9	36,314 6 3	54,252 5 6	560 11 6	7,799 0 9
	2,56,363 11 3	13,11,954 11 9	2,58,691 15 8	12,85,535 7 6	5,15,055 10 11	25,97,490 3 3	35,476 6 6	1,04,526 1 1

APPENDIX N.

Statistics showing the Different varieties and quantities of fish (in lb.) brought by the launches in 1942–43.

Varieties of Fish	Sir Frederick Sykes.	Lady Sykes.	Lady Brabourne	Lord Brabourne	Hydari	Chandtara	Karimi	Hilda	Total
Bangda (Meckerel)	198,558	242,625	604,490	004,498	64,500	310,000	172,000	111,500	2,708,171
Hulva (Black Pomfret)	150	16,082	277	4,345	....	2,200	....	....	23,054
Surmai (Seer fish)	21,420	3,000	20,651	20,150	....	1,100	....	....	66,321
Tarli (Sardine)	....	....	1,918	....	....	....	....	....	1,918
Saranga (White Pomfret)	....	100	....	....	....	....	....	....	100
Kolimb (Prawns)	....	20	....	50	....	....	....	....	70
Khejure	....	160	....	....	....	....	....	....	160
Ghol	38	7,690	650	378	....	....	....	....	8,756
Dagol	56	330	30	256	....	....	....	....	672
Bhing (Herring)	45	4,207	24	37	....	....	....	....	4,323
Kuppa (Tanny)	5,770	540	7,280	1,344	....	....	....	....	14,934
Sakla	16	....	180	....	....	....	....	....	196
Shingada (Cat fish)	....	50	....	....	....	....	....	....	50
Rawas (Indian Salmon)	....	645	....	....	....	....	....	....	645
Miscellaneous fish	1,095	1,913	462	1,329	....	....	....	....	4,799
Total ..	227,148	277,372	635,962	1,032,387	64,500	313,300	172,000	111,500	2,834,169

APPENDIX O.

Pro-forma Account of the fish curing yards for the year ending 31st March 1943.

Expenditure.			Receipts.	
Detailed Expenditure.			Details of Receipts.	
		Rs.		Rs.
Opening stock of salt		26,454	Total amount remitted to Treasury ..	1,36,711
Purchase and Transport charges of salt		56,207	*Add*—Overtime fees recovered from the fish curers shown as less receipts in the account for the year 1941–42 ..	101
Petty Construction and Repairs—				
	Rs.			
Departmental	3,403			1,36,812
Add—Public Works Department	1,791		*Less*—Overtime fees recovered from the fish curers and credited to treasury during 1942–43 to be disbursed to the staff during 1943–44 ..	—236
	5,194			
Less—Expenditure on account of construction of salt kothar and clerks' quarters at Manki fish curing yard and cost of land at Murdeshwar ..	772			
	4,422	4,422		
Other non-contract contingencies	3,993			
Add—Cost of Stationery and forms	650			
	4,643			

Less—Expenditure on Model fish curing sheds	—440		
		4,203	
Pay of yard and supervising establishment	30,915		
Less—Pay of Establishment in Model fish curing sheds	—1,396		
Leave salary of establishment in Model fish curing sheds	—32		
		29,487	
Allowance, Honoraria, etc. of the yard and supervising establishment ..		+9,264	
		+1,673	
		1,31,710	
Total expenditure 1942-43			
Add—Pensionary charges at 9½ per cent. on maximum pay of the establishment		3,398	
		1,35,108	
Less—Value of salt in stock on 31st March 1943 after the close of transactions		—25,282	
		1,09,826	
Net expenditure at the yards			
Add—Net Profit during the year		26,750	
		1,36,576	1,36,576

APPENDIX P.

Statement showing the operations of the Fish Curing Yards in the Ratnagiri and Kanara Districts of the Bombay Province for the year ending 31st March 1943.

Serial No.	Name of the yard.	Year.	Quantity of fish brought to be cured.	Quantity of salt issued.	Quantity of fish removed.	Proportion of fish to each maund of salt.	Total expenditure at the yard including pension contribution.	Receipts. Amount realised by sale of salt.	Miscellaneous receipts.	Stock of salt at the close of the year.	Value of sale in stock at the close of the year.	Total of Cols. 9, 10 and 12.
1	2	3	4	5	6	7	8	9	10	11	12	13
			Mds. s. t.	Mds. s. t.	Mds. s. t.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Mds. s. t.	Rs. a. p.	Rs. a. p.
	Ratnagiri District.											
1	Boria	1941–42 ..	5,278 20 0	1,752 20 0	3,958 35 0	3·01	3,199 3 6	1,861 8 0	5 0 0	1,531 2 0	746 2 8	2,612 10 8
		1942–43 ..	3,841 0 0	1,275 0 0 (a) 48 20 0	2,882 20 0	3·01	1,712 6 0	1,354 11 0 (a) 25 0 0	10 0 0	1,183 32 0	565 4 2	1,929 15 2 (a) 25 0 0
2	Jaigad	1941–42 ..	22,041 0 0	7,346 0 0	16,530 30 0	3·00	4,572 14 10	7,788 5 0	2 5 0	3,128 36 0	1,518 7 10	9,309 1 10
		1942–43 ..	15,136 0 0	5,035 0 0	11,352 0 0	3·00	3,953 12 0	5,349 11 0	2 0 0	1,999 26 0	954 13 4	6,306 8 4
3	Varoda	1941–42 ..	2,364 0 0	788 0 0 (a) 3 35 0	1,773 0 0	3·00	1,228 5 8	837 0 0 (a) 2 0 0	3 8 0	432 36 0	217 10 0	1,058 2 8 (a) 2 0 0
		1942–43 ..	2,608 20 0	869 20 0 (a) 9 28 0	1,956 15 0	3·00	2,032 12 2	923 13 6 (a) 5 0 0	2 2 0	730 5 0	357 12 0	1,283 11 6 (a) 5 0 0
4	Kalbadevi	1941–42 ..	1,287 0 0	429 0 0	965 10 0	3·00	1,094 0 0 *79 5 0	455 13 0	....	958 36 0	448 14 0	904 11 11
		1942–43 ..	633 0 0	211 0 0	474 30 0	3·00	721 1 6 *87 15 3	224 3 0	....	747 36 0	355 3 9	579 6 9

5	Ratnagiri	1941-42 ..	26,161 20 0	8,664 20 0 (a) 97 0 0	19,621 5 0	3·02	5,931 8 0 *342 14 0	9,183 5 6 (a) 50 0 0	....	3,162 18 40	1,556 8 4	10,739 13 10 (a) 50 0 0
		1942-43 ..	17,460 0 0	5,820 0 0 (a) 65 38 32	13,050 0 0	3·00	5,301 10 6 *364 3 6	6,183 12 0 (a) 34 0 0	....	4,128 9 0	2,012 8 0	8,196 4 0 (a) 34 0 0
6	Purnagad	1941-42 ..	2,631 0 0	877 0 0	1,973 10 0	3·00	1,652 11 0	930 14 0	4 14 0	1,151 23 0	504 5 2	1,440 1 2
		1942-43 ..	1,173 0 0	391 0 0	879 30 0	3·00	1,584 13 3	415 7 0	9 4 0	1,532 7 0	670 5 3	1,095 0 3
7	Jaitpur	1941-42 ..	7,686 0 0	2,562 0 0 (a) 24 10 0	5,764 20 0	3·00	3,068 3 0	2,711 10 0 (a) 12 8 0	0 10 0	3,384 19 0	1,615 2 9	4,327 6 9 (a) 12 8 0
		1942-43 ..	4,341 0 0	1,447 0 0 (a) 77 24 0	3,255 30 0	3·00	2,189 2 8	1,537 7 0 (a) 15 0 0	2 8 0	2,807 16 0	1,345 10 0	2,885 9 0 (a) 15 0 0
8	Vijaydurga	1941-42 ..	5,085 0 0	1,695 0 0 (a) 72 30 0	3,813 30 0	3·00	2,347 12 1	1,794 9 0 (a) 37 8 0	3 0 0	1,235 38 0	597 3 1	2,394 12 1 (a) 37 8 8
		1942-43 ..	5,038 20 0	1,679 20 0 (a) 67 36 0	3,778 35 0	3·00	2,241 8 0	1,784 7 6 (a) 35 0 0	5 2 0	1,426 34 0	689 2 7	2,478 12 1 (a) 35 0 0
9	Mumbri	1941-42 ..	1,311 0 0	360 0 0 (a) 58 8 0	983 10 0	3·64	1,438 4 2	382 7 6 (a) 30 0 0	7 8 0	321 10 0	171 2 6	561 2 0 (a) 30 0 0
		1942-43 ..	3,454 0 0	763 0 0	2,587 15 0	4·52	1,756 3 5	810 11 0	6 12 0	736 30 0	386 13 0	1,204 4 0
	Carried over ..	1941-42 ..	73,845 0 0	24,474 0 0 (a) 256 3 0	45,383 30 0		24,532 14 3 *422 3 0	25,945 8 0 (a) 132 0 0	26 13 0	15,307 18 40	7,375 9 11	
		1942-43 ..	63,446 20 0	21,031 20 0 (a) 190 4 72	47,537 12 0		22,582 9 0 *423 0 0	21,548 0 6 (a) 98 0 0	25 0 6	14,858 33 0	7,110 7 7	28,683

Serial No.	Name of the yard.	Year.	Quantity of fish brought to be cured.	Quantity of salt issued.	Quantity of fish removed.	Proportion of fish to each maund of salt.	Total expenditure at the yard including pension contribution.	Receipts.				
								Amount realised by sale of salt.	Miscellaneous receipts.	Stock of salt at the close of the year.	Value of sale in stock at the close of the year.	Total of Cols. 9, 10 and 12.
1	2	3	4	5	6	7	8	9	10	11	12	13
			Mds. s. t.	Mds. s. t.	Mds. s. t.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Mds. s. t.	Rs. a. p.	Rs. a. p.
	Brought forward ..	1942–43 ..	73,845 0 0	24,474 0 0 (a) 256 3 0	45,383 30 0		24,532 14 3 *422 3 0	25,945 8 0 (a) 132 0 0	26 13 0	15,307 18 40	7,375 9 11	33,347 14 11 (a) 132 0 0
		1942–43 ..	63,446 20 0	21,037 20 0 (a) 190 4 72	47,537 12 0		22,582 9 0 *423 0 0	21,548 0 6 (a) 98 0 0	25 0 6	14,858 33 0	7,110 7 7	28,683 8 7 (a) 98 0 0
	Ratnagiri District —contd.											
10	Mithbao	1941–42 ..	4,395 20 0	959 20 0	3,296 25 0	4·58	1,320 4 0	1,017 14 6	0 8 0	432 13 0	227 1 7	1,245 8 1
		1942–43 ..	1,614 10 0	425 0 0 (a) 38 32 0	1,210 27 0	3·79	1,239 8 8	451 9 0 (a) 20 0 0	0 4 0	915 15 0	473 11 3	925 8 3 (a) 20 0 0
11	Achra	1941–42 ..	1,621 20 0	481 20 0	1,226 5 0	3·37	1,455 4 6	511 5 6	0 9 6	890 29 40	453 8 4	965 7 4
		1942–43 ..	3,383 0 0	1,084 0 0	2,537 0 0	3·12	1,891 1 8	1,151 12 0	5 2 0	974 16 0	512 0 7	1,668 14 7
12	Talashil	1941–42 ..	865 0 0	189 0 0	663 20 0	4·58	677 14 6	200 13 0	0 13 6	1,425 7 40	676 15 5	878 9 11
		1942–43 ..	3,484 0 0	863 20 0	2,613 0 0	4·03	669 10 0	917 7 6	2 0 0	336 39 0	183 15 5	1,103 6 11
13	Malwan	1941–42 ..	23,206 0 0	5,438 0 0 (a) 107 26 0	14,390 30 0	4·27	5,322 13 2	5,759 9 6 (a) 55 8 0	189 1 10	5,085 2 40	2,491 8 1	8,440 3 5 (a) 55 8 0
		1942–43 ..	34,708 20 0	8,021 0 0 (a) 24 10 0	26,031 5 0	4·32	7,889 13 0	8,522 5 0 (a) 18 8 0	314 1 7	5,556 30 0	2,708 15 2	11,545 5 9 (a) 18 8 0

14	Devbag ..	1941-42 ..	15,272 0 0	4,416 20 0	10,555 20 0	3·46	3,765 9 8	4,689 8 6	10 5 0	3,428 34 0	1,701 10 5	6,401 7 11
		1942-43 ..	21,487 20 0	6,400 0 0	16,667 5 0	3·35	4,969 2 0	6,800 0 0	20 14 6	3,669 7 36	1,780 3 0	8,601 1 6
15	Mobar	1941-42 ..	6,772 20 0	1,847 20 0	5,077 25 0	3·67	2,487 7 5	1,959 10 6	10 12 0	2,745 11 40	1,326 7 8	3,296 14 2
		1942-43 ..	13,594 0 0	3,932 0 0	10,187 0 0	3·45	3,962 3 9	4,177 12 0	5 8 0	2,655 28 40	1,287 15 9	5,471 13 9
16	Kochra	1941-42 ..	2,415 20 0	630 20 0	1,811 25 0	3·83	1,605 13 0	669 3 6	2 0 0	650 6 0	315 7 7	986 11 1
												(a) 10 0 0
				(a) 19 15 0								
		1942-43 ..	3,693 0 0	897 0 0	2,769 30 0	4·11	1,968 7 0	953 1 0	0 11 0	742 35 0	362 2 5	1,315 14 5
17	Vengurla ..	1941-42 ..	15,556 20 0	4,822 20 0	11,599 20 0	3·23	4,954 7 3	5,115 3 6	15 12 0	2,812 25 0	1,410 11 2	6,541 10 8
							*175 0 9	(a) 512 8 0				(a) 512 8 0
				(a) 1,008 32 0								
		1942-43 ..	25,843 0 0	8,455 0 0	19,382 10 0	3·05	6,916 5 3	8,983 7 0	10 0 0	3,016 11 0	1,504 5 11	10,497 12 11
							*202 15 0	(a) 127 8 0				(a) 127 8 0
				(a) 119 12 40								
18	Shiroda ..	1941-42 ..	11,003 0 0	3,178 0 0	7,824 35 0	3·46	2,935 7 3	3,374 2 0	11 4 0	1,872 27 0	974 5 11	4,359 11 11
		1942-43 ..	17,627 0 0	4,398 0 0	13,220 10 0	4·00	4,525 5 0	4,672 14 0	18 3 0	2,110 1 40	1,091 15 0	5,783 0 0
								(a) 15 8 0				(a) 15 8 0
				(a) 30 2 64								
	Total for Ratnagiri District.	1941-42 ..	1,54,952 20 0	46,437 0 0	1,11,827 35 0	..	49,057 15 0	49,242 14 6	267 14 10	34,650 14 40	16,953 6 1	66,464 3 5
								(a) 730 0 0				(a) 736 0 0
				(a) 1,391 36 0								
		1942-43 ..	1,79,119 10 0	51,966 20 0	1,34,835 22 0	..	55,524 13 10	55,214 6 6	414 8 1	35,270 18 36	17,242 12 7	72,871 11 2
				(a) 482 3 56			(a) 655 1 9	(a) 295 8 0				(a) 295 8 0

APPENDIX P—*contd.*

Serial No.	Name of the yard.	Year.	Quantity of fish brought to be cured.	Quantity of salt issued.	Quantity of fish removed.	Proportion of fish to each maund of salt.	Total expenditure at the yard including pension contribution.	Receipts. Amount realised by sale of salt.	Miscellaneous receipts.	Stock of salt at the close of the year.	Value of sale in stock at the close of the year.	Total of Cols. 9, 10 and 12.
1	2	3	4	5	6	7	8	9	10	11	12	13
			Mds. s. t.	Mds. s. t.	Mds. s. t.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Mds. s. t.	Rs. a. p.	Rs. a. p.
	Kanara District.											
19	Majali ..	1941-42 ..	23,723 16 0	5,935 20 0	18,460 15 0	4·30	4,172 4 4 *73 4 0	6,306 7 6	4 2 0	1,960 15 0	889 3 3	7,199 12 9
		1942-43 ..	26,022 36 0	6,631 0 0	20,290 11 0	3·92	4,645 6 0 *195 6 6	7,045 7 0	89 10 9	1,298 38 0	579 10 7	....
20	Karwar (Baitkhol) ..	1941-42 ..	22,989 16 0	5,981 0 0 (a) 3 35 0	17,810 28 0	3·84	4,482 8 0	6,354 13 0 (a) 2 0 0	564 3 6	3,037 6 40	1,403 7 0	8,322 7 6 (a) 2 0 0
		1942-43 ..	69,487 37 0	18,632 0 0 (a) 113 19 48	53,508 20 0	4·17	10,302 4 0	19,796 8 0 (a) 58 8 0	222 0 0	1,992 25 0	886 1 3	.... (a) 58 8 0
21	Bingi ..	1941-42 ..	44,155 0 0	13,146 0 0	35,237 30 0	3·36	6,995 13 3 *48 2 0	13,967 6 0	....	1,839 17 0	846 11 5	14,814 1 5
		1942-43 ..	61,957 20 0	19,775 20 0	42,192 0 0	3·13	11,614 8 0 *231 9 0	21,011 7 6	16 4 0	1,771 17 0	790 7 11	....

22	Chendia ..	1941-42 ..	21,890 0 0	7,917 0 0	18,933 0 0	4'00	4,707 0 7 *48 14 0	8,411 2 0	7 9 0	1,882 0 0	847 3 1	9,265 14
		1942-43 ..	41,749 20 0	12,389 20 0	29,404 0 0	3'37	7,376 14 0 *47 13 0	13,163 13 6	15 12 0	2,064 0 0	908 3 0	....
23	Kodar ..	1941-42 ..	1,242 20 0	376 20 0	823 20 0	3'30	1,007 1 4	399 15 0	1 1 0	1,111 0 0	502 2 2	903 2 2
		1942-43 ..	1,989 20 0	617 20 0	1,412 0 0	3'22	924 5 3	656 1 6	0 6 0	886 14 0	393 6 1	....
24	Harwada ..	1941-42 ..	12,087 0 0	3,506 0 0	8,514 0 0	3'45	2,618 13 9 *79 10 0	3,725 2 0	0 4 0	1,376 10 0	630 6 7	4,355 12 7
		1942-43 ..	27,247 20 0	8,246 0 0	19,087 0 0	3'30	5,290 6 5 *45 14 0	8,761 6 0	6 6 0	1,134 15 0	509 0 9	....
25	Keni ..	1941-42 ..	3,508 0 0	1,080 0 0	2,424 0 0	3'25	1,932 1 11 *99 13 0	1,147 8 0	0 12 6	1,700 12 0	765 10 7	1,913 15 1
		1942-43 ..	4,737 20 0	1,244 20 0 (a) 53 14 0	3,415 0 0	3'80	1,579 10 9 *100 5 5	1,322 4 6 (a) 27 8 0	6 10 0	1,376 26 0	600 0 4	.... (a) 27 8 0
26	Gangawali ..	1941-42 ..	1,801 0 0	507 0 0	1,382 30 0	3'55	1,040 6 0	538 11 0	0 2 6	1,151 19 0	486 13 10	1,025 11 4
		1942-43 ..	4,338 0 0	1,126 0 0	3,253 20 0	3'85	1,222 10 4	1,196 6 0	....	590 10 0	257 7 8	....
27	Kumtha ..	1941-42 ..	2,236 20 0	542 20 0 (a) 5 33 0	1,753 20 0	4'10	940 13 6 *209 8 0	574 14 6 (a) 3 0 0	2 0 0	927 17 0	411 5 3	988 3 9 (a) 3 0 0
		1942-43 ..	2,166 20 0	472 20 0 (a) 97 0 0	1,502 20 0	4'53	873 13 7 *121 9 2	502 0 6 (a) 50 0 0	0 8 0	793 21 0	326 11 10	.... (a) 50 0 0
	Carried over ..	1941-42 ..	1,38,632 32 0	38,991 20 0 (a) 9 28 0	1,05,339 23 0	..	27,896 14 2 *559 3 0	41,425 15 0 (a) 5 0 0	580 2 6	14,982 16 40	6,782 15 2	48,789 0 8 (a) 5 0 0
		1942-43 ..	67,755 30 0	19,471 0 0 (a) 54 12 64	50,145 9 0	..	19,117 11 9 *413 11 0	19,604 9 6 (a) 28 0 0	655 7 2	13,036 27 46	5,657 8 1	25,917 8 9 (a) 28 0 0

APPENDIX P—*contd.*

Serial No.	Name of the yard.	Year.	Quantity of fish brought to be cured.	Quantity of salt issued.	Quantity of fish removed.	Proportion of fish to each maund of salt.	Total expenditure at the yard including pension contribution.	Receipts.				
								Amount realised by sale of salt.	Miscellaneous receipts.	Stock of salt at the close of the year.	Value of sale in stock at the close of the year.	Total of Cols. 9, 10 and 12.
1	2	3	4	5	6	7	8	9	10	11	12	13
			Mds. s. t.	Mds. s. t.	Mds. s. t.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Mds. s. t.	Rs. a. p.	Rs. a. p.
	Brought forward ..	1941-42 ..	1,38,632 32 0	38,991 20 0 (a) 9 28 0	1,05,339 23 0	..	27,896 14 2 *559 3 0	41,425 15 0 (a) 5 0 0	580 2 6	14,982 16 40	6,782 15 2	48,789 0 8 (a) 5 0 0
		1942-43 ..	67,755 30 0	19,471 0 0 (a) 54 12 64	50,145 9 0	..	19,117 11 9 *413 11 0	19,604 9 6 (a) 28 0 0	655 7 2	13,036 27 46	5,657 8 1	25,917 8 9 (a) 28 0 0
	Kanara District—contd.											
28	Mallukurwa ..	1941-42 ..	7,807 20 0	1,561 20 0	5,855 25 0	5·00	2,364 15 0 *274 4 0	1,654 15 6	33 8 0	1,233 32 0	577 3 0	2,265 10 6
		1942-43 ..	7,125 0 0	1,425 0 0	5,343 30 0	5·00	2,189 3 0 *107 8 9	1,514 1 0	27 6 0	2,096 32 0	1,009 1 3	....
29	Manki	1941-42 ..	3,953 0 0	862 0 0	2,977 5 0	4·59	1,283 15 5	915 14 0	18 13 6	912 1 0	356 6 4	1,291 1 10
		1942-43 ..	4,810 0 0	1,067 0 0	3,802 0 0	4·50	1,352 3 0	1,133 11 0	17 0 0	1,018 0 0	464 7 4	....
30	Murdeshwar ..	1941-42 ..	4,033 0 0	884 20 0 (a) 27 6 0	3,348 0 0	4·56	1,769 2 5 *62 2 6	939 12 6 (a) 14 0 0	20 0 0	1,324 1 0	622 11 3	1,582 7 9 (a) 14 0 0
		1942-43 ..	7,880 10 0	1,364 10 0	6,624 30 0	5·77	1,394 3 8 *54 5 6	1,449 12 6	29 12 0	514 18 0	234 11 5	....

31	Shirali ..	1941-42 ..	5,671 0 0	1,218 0 0	4,453 0 0	4·65	1,818 11 4 *199 7 0	1,293 14 0	15 5 0	1,240 11 0	583 5 1	1,892 8 1
		1942-43 ..	7,608 0 0	1,582 0 0	6,026 0 0	4·80	1,906 0 10 *101 13 3	1,680 14 0	15 0 0	1,420 7 0	644 6 3	....
32	Bhatkal ..	1941-42 ..	1,541 20 0	359 20 0	1,184 0 0	4·29	1,016 0 0 *97 12 0	370 7 6	19 8 0	1,469 3 0	578 7 11	968 7 5
		1942-43 ..	1,657 0 0	374 0 0	1,266 0 0	4·43	699 1 6 *120 5 9	397 6 0	18 0 0	1,095 3 0	435 15 1	....
	Total for Kanara District ..	1941-42 ..	3,16,591 12 0	90,314 0 0 (a) 1,428 30 0	2,35,045 8 0	....	85,207 9 4 *1,789 15 6	95,843 13 0 (a) 749 0 0	955 3 10	55,811 39 0	26,464 6 10	1,23,253 7 8 (a) 749 0 0
		1942-43 ..	4,47,896 13 0	1,26,913 20 0 (a) 745 37 4	3,31,962 33 0	....	1,06,895 8 2 *1,791 12 1	1,34,845 9 6 (a) 431 8 0	879 2 10	53,323 4 36	25,282 7 4	1,61,007 3 8 (a) 31 8 0

APPENDIX Q.

Recognised Technical and Industrial Institutions in the Bombay Province, 1942-43.

Serial No.	Name of Institution and Place.	Recognised Course of Instruction.	Management.	Grant-in-aid paid in 1942-43.
	BOMBAY DIVISION.			Rs.
	Government.			
1	The Government Tanning Institute, Bandra, Bombay 20.	Advanced Tanning and Artisans' Tanning ..	The Director of Industries, Bombay	....
2	The Government Leather Working School, Bandra, Bombay 20.	Advanced Leather Work and Artisans' Leather Work.	Do.	....
3	The School of Industry, Ratnagiri	Mechanical Apprentices Work Carpentry "A", Trained Maistry.	Do.	....
	Aided—(Registered for Inspection, Examination and Grant-in-aid).			
4	The Primary Handicraft Classes, Municipal Marathi Boys' School, Girgaum, Bombay 4.	Carpentry "A", Ladies' Tailoring, Practical Tailoring.	The Bombay Handwork Education Society, Bombay.	420
5	The Ladies' Tailoring Class attached to Bhagini Samaj, Raval Building No. 2, Lamington Road, Bombay.	Ladies' Tailoring.	The Managing Committee of the Bhagini Samaj, Bombay.	223
6	The Textile Technical School, Damodar Thackersey Hall, Parel, Bombay 12.	Lower Grade Cotton Spinning and Cotton Weaving.	The Social Service League, Bombay	2,438
7	The Dadar School for the Blind, Dadar, Bombay	Wool knitting, Sisal and hemp work, Coir mat making; Bead and chain making, Basketry.	The Society for the protection of children in Western India, Bombay.	1,059
8	The N. S. D. Industrial Home for the blind, 52, Bombay Development Department Worli, Bombay 18.	Cane work, wire work, Pill box making, string bags, Tennis nets, Repairing Musical Instruments.	The Blind Relief Association, Bombay ..	686
9	The R. H. Patuck Industrial School, Ghodbunder Road, Andheri (West).	Carpentry "A", Handloom Weaving ..	The Organising board of the School	1,113
10	A. R. Sonawala Industrial School, Bordi, District Thana.	Handloom Weaving	The Gokhale Education Society	952
11	The K. E. S. Topiwala Industrial School, Alibag, District Kolaba.	Carpentry "A", Typography, Handloom-weaving, Ladies' Tailoring.	Konkan Education Society, Alibag	1,869
12	The Industrial Classes Press attached to K. E. S. V. K. High School, Panvel, District Kolaba.	Typography	Konkan Education Society, Alibag	212

13	The St. Barnabas' Industrial School, Manmad, District Nasik.	Carpentry "A", Practical Tailoring	The Nasik Dioceson Council	836
	Recognised—(for Inspection and Examination only).			
14	The Khetwadi Marathi Central School, Bombay 4	Carpentry "A", Practical Tailoring	Municipal Schools Committee, Bombay	....
15	The Lamington Road Gujarati Central School, Bombay 7.	Carpentry "A"	Do.	....
16	The Foras Road Marathi Central School, Bombay 8.	Do.	Do.	....
17	The Dongri Marathi Central School, Bombay 9	Do.	Do.	....
18	The J. R. Central Urdu Boys School, Sandhurst Road, Bombay 9.	Do.	Do.	....
19	The Ghodapdeo Marathi Central School, Bombay 10.	Do.	Do.	....
20	The Parel Marathi Central School, Bombay 12	Do.	Do.	....
21	The Lady Jamshetji Road Marathi Central School, Bombay 14.	Do.	Do.	....
22	The R. C. Mahim Urdu Central School, Bombay 16.	Do.	Do.	....
23	The Radio Electric Institute, Lamington Chambers, Lamington Road, Bombay 4.	Radio Service Work	Proprietor, Radio Electric Institute, Bombay	....
24	The E. M. F. Radio Institute, Bombay Abdeyally Chambers, Lamington Road, Bombay.	Radio Service Work	Proprietor, E. M. F. Radio Institute, Bombay	....
25	The Institute of Radio Technology, Jestharam Baug, Tran Terminus, Dadar, Bombay.	Do.	Proprietor, Institute of Radio Technology, Bombay	....
26	The Instituto Indo-Portuguese, Kavarana Building, Dhobi Talao, Bombay.	Wireman's Apprentice and Electricians Course.	Managing Committee of the Institute Indo-Portuguese.	....
27	The Mahila Kala Mandir, Bombay. Laxmi Sadan, Vithalbhai Patel Road, Bombay 4.	Ladies' Tailoring	Advisory Board of Mahila Kala Mandir	....
28	The Bombay Technical Institute, Victoria 3rd Cross Lane, Byculla, Bombay 27.	Radio Service Work and Wireman's Apprentice Course.	Proprietor, Bombay Technical Institute	....
29	The Gujerati Hindu Stree Mandal Amroli House, 123, Vithalbhai Patel Road, Bombay.	Ladies' Tailoring	Managing Committee, Gujarati Hindu Stree Mandal, Bombay.	....
30	The Mahomed Hajee Saboo Siddik Institution, Bombay, 5, Shepherd Road, Byculla, Bombay.	Radio Service Work and Wireman's Apprentice Course.	The Trustees of the Institution	....
31	The B. N. Gamadia Parsi Hunnar Shala, Gamadia Parsee Colony, Tardeo, Bombay.	Carpentry "A" and Practical Tailoring	Managing Committee Parsi Hunnar Shala	....
32	The J. N. Petit Parsi Orphanage, Lalbaug, Parel, Bombay.	Do.	Managing Committee Nessarwanjee Manackjee Petit Charity Fund.	....
33	The Khalsa College Technical Institute, Kings Circle, Matunga, Bombay 19.	Radio Service Work, Wireman's and Electrician's Course.	Notified Sikh Gurudwara Committee Nanak Saheb.	....

Serial No.	Name of Institution and Place.	Recognised course of Instruction.	Management.	Grant-in-aid paid in 1942–43.
	BOMBAY DIVISION—*contd.*			
	Recognised—(for Inspection and Examination only)—contd.			
34	The Zarapkar Tailoring and Cutting Institute, Dadar, Bombay 14.	Tailoring and Cutting ..	Proprietor, Zarapkar Tailoring and Cutting Institute, Bombay.	....
35	The David Sassoon Industrial School, 83, Lady Hardinge Road, Bombay 16.	Carpentry, Tailoring ..	Committee consisting of Government Nominees and Representatives of the Sassoon Family and co-opted members.	....
36	The Bai Avabai Framji Petit Parsee Girls Orphanage, Bandra. Pali-Hill, Bandra.	Handloom Weaving, Dyeing and Calico Printing.	Managing Committee Bai Avabai Framji Petit Parsi Girls' Orphanage, Bandra.	....
37	The Ladies Tailoring Class attached to Lokamanya Seva Sangh Parle, Tilak Mandir, Vile-Parle (Bombay Suburban District).	Ladies Tailoring ..	Lokmanya Seva Sangh, Vile-Parle ..	....
38	The Industrial Classes attached to Marine College and Seamen's Orphanage, Novha, Bombay Harbour.	Carpentry, Handloom Weaving and Practical Tailoring.	Managing Board of Education, Marine College and Seamen's Orphanage, Novha.	....
39	The Abdulla Fazalbhoy Technical Institute, St. Xavier College, Cruickshank Road, Bombay 1.	Photography, Cine-photography, Sound Recording, Advanced Radio Communication, Radio Servicing and Electricians course and wireman apprentice course.	St. Xavier's College, Bombay	....
40	The Mahila Kala Bhuvan, Kunte Building, Vithalbhai Patel Road, Girgaum Bombay 4.	Ladies Tailoring Course ..	Proprietor, Mahila Kala Bhuvan, Bombay ..	....
	CENTRAL DIVISION.			
	Government.			
1*	The Powerloom Weaving Instructional Institute, Sholapur.	Powerloom Weaving ..	Director of Industries, Bombay	....
2	The Yeravda Industrial School, Camp: Nasrapur (Bhor-State).	Capentry, Smithy and Practical Tailoring ..	Backward Class Officer, Poona	....
3	The Industrial Settlement School, Sholapur ..	Carpentry " C " Course ..	Backward Class Officer, Poona	....
	Aided—(Registered for Inspection, Examination and Grant-in-aid).			
4	The Victoria Jubilee Municipal Technical School, Shukrawar Peth, Poona 2.	Mechanical Apprentices, Trained Maistry, Carpentry " A ", Wireman Apprentice,	The Adult Education Committee appointed by the Poona Municipality	2,879

5	The Mission Workshop and Industrial School, Panch Howd, Poona.	Carpentry "B"	The Society of St. John Evangelist Mission ..	633
6	The Maharashtra Mudran Shala, 624, Sadashiv Peth, Poona.	Typography	The Poona Anath Vidyarathi Graha ..	885
7	The D. E. Society's Technical Institute, (attached to Fergusson College), Poona 4.	Pigments, Paints and Varnishes	The Deccan Education Society, Poona ..	961
8	The Sir Cusrow Wadia Institute of Electrical Technology C/o Nowrosjee Wadia College, Poona No. 1.	Electrical Engineering and Radio Service Work.	The Modern Education Society, Poona ..	4,357
9	The School of Radio Physics and Electronics, C/o S. P. College, Poona 2.	Radio Service Work and Advanced Radio Communication.	Shikshan Prasarak Mandali, Poona	1,856
10†	The Poona School and Home for the Blind, 272, Somwar Peth, Poona.	Weaving, Sewing, Canework, Bidi Work ..	The Blind Relief Association, Bombay ..	533
11	The Sir D. N. Petit Industrial School, Sirur, District Poona.	Carpentry "A"	American Marathi Mission	623
12	District Local Board Industrial School, Satara ..	Carpentry, Agricultural Carpentry and Smithy and Handloom Weaving.	District Local Board, Satara	1,503
13	The Municipal Technical School, Sholapur ..	Mechanical Apprentice, Trained Maistry, Carpentry "A", Handloom Weaving, Lower Grade Cotton Weaving and Wireman Apprentice.	The Technical School Committee appointed by the Sholapur Municipality.	1,833
14	The Robertson School of Industry, C/o Administrator Municipality, Sholapur.	Carpentry "A" and Trained Maistry ..	Pandharpur City Municipality	806
15	The Salvation Army Boys' Industrial School, Fariabagh Road, Ahmednagar.	Handloom Weaving	The Salvation Army, Bombay	412
16	The Industrial Classes attached to Modern High School, Ahmednagar.	Carpentry "A" and Practical Tailoring ..	Hind Seva Mandal, Ahmednagar	327
17	The King Edward VII, Technical School, Dhulia, West Khandesh.	Mechanical Engineering, Mechanical Apprentice, Carpentry "A", Trained Maistry Wireman Apprentice and Handloom Weaving.	The Joint Committee of the District Local Board and Municipal Borough, Dhulia.	4,881
	Recognised (for Inspection and Examination only).			
18	R. G. Tamhankar's Wireman's Class, Cotton Market, Ahmednagar.	Wireman's Course	Proprietor R. C. Tamhankar's Wireman's Class, Ahmednagar.	....
19	The Jadhav College of Tailoring and Cutting, 405, Shukrawar, Poona 2.	Tailoring and Cutting	Proprietor Jadhav College of Tailoring and Cutting, Poona.	....
20	The Godbole's Photographic Classes, Poona ..	Photography	Proprietor Godbole's Photographic Classes, Poona	....
21	The Mechanical and Electrical Engineering School, Pandharpur.	Wireman's Apprentice and Electrician's Courses.	Proprietor Mechanical and Electrical Engineering School, Pandharpur.	....

*(The conversion of the old Government Handweaving Institute into a Powerloom Weaving Instructional Institute was made under Government Resolution No. 7405, dated 13th May 1942).

†Registered for Inspection and Examination only.

APPENDIX Q

Serial No.	Name of Institution and Place.	Recognised course of Instruction.	Management.	Grant-in-aid paid in 1942–43.
	CENTRAL DIVISION—*contd.*			Rs.
	Recognised (for Inspection and Examination only.)—contd.			
22	The Variety Tailoring and Cutting Academy, Seva Sadan Chowk, Saraswati Niwas, Lakshmi Road, Poona.	Tailoring and Cutting	Managing Board of the Variety Tailoring and Cutting Academy, Poona	....
	NORTHERN DIVISION.			
	Government.			
1	R. C. Technical Institute, Ahmedabad ..	Mechanical Engineering, Higher Grade Cotton Spinning and Weaving, Wireman's Course.	Director of Industries, Bombay	....
	Aided—(Registered for Inspection, Examination and Grant-in-aid.)			
2	The Salvation Army Boys' Boarding and Industrial School, Kaira Camp, Gujerat.	Handloom Weaving	Salvation Army, Bombay	550
3	The I. P. Mission Industrial School, Borsad, District Kaira.	Carpentry "A" and Practical Tailoring ..	Irish Presbyterian Mission, Borsad ..	655
4	The Vocational Training School, Ankleshwar, District Broach.	Carpentry "C" Course	Education Committee, Church of Brethern Mission.	731
5	The F. S. Parekh Technical Institute, Surat, Chowk Bazar, Surat.	Mechanical Engineering, Automobile Engineering, Mechanical Apprentice, Automobile Apprentice, Carpentry "A", Wireman Apprentice, and Handmade Paper-making.	The Surat Borough Municipality, Surat ...	6,000
6	The Mahajan Home Industrial School, Ochhavalal Nazar Building, Khatergam Road, Taluka Chorasi, District Surat.	Handloom Weaving, Carpet Weaving, and Ziework.	Surat Hindu Orphanage	....
	Recognised (for Inspection and Examination only).			
7	The Seth C. N. Industrial School, Ambawadi, [illegible]	Mechanical and Electrical Engineering, Radio [illegible]	The Board of Trustees, Seth Chimanlal Nagindas [illegible]	....

8	The Talimi Kendra (Jyoti Sangh Sthapit) Ahmedabad Maganbhai Haveli, Raipur, Ahmedabad.	Ladies Tailoring and Tailoring and Cutting ..	The Secretary, Executive Committee, Jyoti Sangh, Ahmedabad	....
9	The Ideal Tailor and Cutter Institute, Anand Bhuvan, Ellis Bridge, Ahmedabad.	Tailoring and Cutting	The Proprietor of the Institute ..	....
10	The Sthree Jamnabai Saraswati Mandir, Kadva Pole, Ahmedabad.	Ladies' Tailoring	The Trustees of the Mafatlal Gagalbhai's Trust ..	....
11	The Parsi Technical and Industrial Institute, Majura Gate, Surat.	Automobile, Electrical and Internal Combustion Engineering, Carpentry "A" and Wireman Apprentice Course.	The Parsi Panchayat Board, Surat ..	....
	Southern Division.			
	Recognised (for Inspection and Examination only).			
1	The National Tailoring and Cutting Institute, Koppikar Road, Hubli, District Dharwar.	Tailoring and Cutting	The Proprietor, National Tailoring and Cutting Institute, Hubli	....
2	The Industrial Settlement School, Hubli ..	Carpentry "C" Course	The Criminal Tribes Settlement Officer	....
	Indian States.			
	Recognised (for Inspection and Examination only.)			
1	The Morvi Technical Institute, Morvi (Kathiawar, India).	Mechanical Engineering, Mechanical Apprentice and Wireman's work.	Morvi Darbar, Morvi State	....
	Sind Province.			
	Aided (Registered for Inspection, Examination and Grant-in-aid).			
1	The Halford Technical School, Jacobabad (Sind).	Carpentry, Woodturning and Lacquering ..	Governing Body, Halford Technical School ..	....
2	The Victoria Jubilee Technical Institute, Sukkar (Sind).	Carpentry "A" Mechanical and Wireman's Apprentice, Electricians, Electro-plating and Battery charging.	Public Body with Collector as President ..	....

APPENDIX R.

COURSES OF INSTRUCTION RECOGNISED BY THE DEPARTMENT OF INDUSTRIES THROUGH THE COMMITTEE OF DIRECTION FOR TECHNICAL AND INDUSTRIAL TRAINING, BOMBAY.

Course.	Duration.
1. Mechanical Engineering	3 Years.
2. Electrical Engineering	3 "
3. Automobile Engineering	3 "
4. Internal Combustion Engineering	3 "
5. Higher Grade Textile Manufacture—	
(a) Cotton Spinning	3 "
(b) Cotton Weaving	3 "
6. Pigments, Paints, and Varnishes	2 "
7. Advanced Radio Communication	2 "
8. Mechanical Apprentice	2 "
9. Automobile Apprentice	2 "
10. Trained Maistry	1 Year (after passing carpentry "A" course).
11. Carpentry—	
(a) "A" Course (Practice, Drawing and Woodwork Technology)	3 Years.
(b) "B" Course (Practice and Drawing)	3 "
(c) "C" Course (Practice)	3 "
12. Agricultural Carpentry and Smithy	2 "
13. Woodturning and Lacquering	2 "
14. Typography (Composition and Printing)	3 "
15. Lower Grade Textile Manufacture—	
(a) Cotton Spinning	3 "
(b) Cotton Weaving	3 "
16. Handloom Weaving—	
(a) Elementary Handloom Weaving	2 "
(b) Advanced Hand Weaving	2 "
(c) Artisan's Hand Weaving	1 Year.
17. Dyeing and Printing	2 Years.
18. Practical Tailoring	3 "
19. Ladies' Tailoring	2 "

APPENDIX R—*contd.*

Course.	Duration.
20. Tailoring and Cutting	1 Year.
21. Wireman Apprentice Course	1 "
22. Electro-plating and Battery Charging	1 "
23. Electrician's Course	1 "
24. Radio Servicing Course	1 "
25. Tanning—	
(*a*) Advanced Tanning	2 Years.
(*b*) Artisan's Tanning	1 Year.
26. Leather Work—	
(*a*) Advanced Foot-wear manufacture	2 Years.
(*b*) Artisan's Foot-wear manufacture	1 Year.
(*c*) Artisan's Leather-goods manufacture	1 "
27. Photography	1 "
28. Handmade Paper-making	1 "
29. Sound Recording	2 Years.
30. Cine Photography	2 "

APPENDIX S.

Expenditure on and Receipts from the R. C. Technical Institute, Ahmedabad, for the year 1942–43.

Credit.

Particulars.	Rs.	a.	p.
1. Sale proceeds of articles, etc.	57	15	3
2. Fees from students	3,213	8	0
3. Miscellaneous	16	7	6
4. Refund of scholarship	10	0	0
Total ..	3,297	14	9

Debit.

Particulars.	Rs.	a.	p.
1. Pay of Officers (Principal)	7,800	0	0
2. Pay of Establishment—			
Teachers	15,987	15	0
Clerks	1,380	0	0
Peons	433	8	0
Leave salary	176	4	0
Dearness Allowance	956	12	0
3. Wages of workmen	....		
4. Allowances (Travelling Allowance) Honoraria, etc.	7	2	0
5. Scholarships to Government Scholars	154	1	0
6. Stores purchased	2,865	10	3
7. *Other Miscellaneous*—			
Salary of menials paid from contingencies	2,204	4	0
Dearness Allowance paid to menials from contingencies ..	619	9	0
Contingencies	490	4	0
Tax paid to Municipality	382	0	0
Total ..	33,457	5	3

APPENDIX T.

Expenditure on and Receipts from the Government Tanning Institute, Bandra, Bombay 20, for the year 1942-43.

Credit. Particulars.	Amount.	Debit. Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
1. Sale proceeds of tanned hides, skins and glue ..	10,270 14 6	1. Pay of officers ..	....
2. Miscellaneous receipts ..	37 9 0	2. Pay of Establishment ..	7,926 10 0
		3. Wages to workmen ..	786 4 0
		4. Allowances and Honoraria ..	104 14 0
		5. Scholarships ..	4,287 4 0
		6. Stores purchased (raw materials and chemicals) ..	6,554 15 0
		7. Other Miscellaneous expenses ..	3,779 10 6
		8. Dearness allowance ..	649 0 0
Total ..	10,308 7 6	Total ..	24,088 9 6

APPENDIX U.

Expenditure on and Receipts from the Government Leather Working School, Bandra, Bombay 20, for the year 1942-43.

Credit. Particulars.	Amount.	Debit. Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
1. Sale proceeds ..	1,105 5 6	1. Pay of officers ..	2,795 0 0
2. Fees from students ..	90 0 0	2. Pay of establishment ..	4,281 12 0
3. Miscellaneous (Refund of scholarships)	85 5 0	3. Wages of workmen ..	....
		4. Allowances and Honoraria ..	1,744 14 0
		5. Scholarships ..	1,693 8 0
		6. Stores purchased ..	3,073 1 6
		7. Miscellaneous ..	789 8 9
Total ..	1,280 10 6		

APPENDIX V.

Expenditure on and Receipts from the School of Industry, Ratnagiri, for the year 1942-43.

Credit. Particulars.	Amount.	Debit. Particulars.	Amount.
	Rs. a. p.		Rs. a. p.
1. Sale proceeds of articles prepared in the school ..	2,383 15 3	1. Pay of establishment ..	7,414 4 0
2. Miscellaneous receipts ..	11 10 0	2. Store-keeper allowance ..	60 0 0
3. Rent from School Board, Ratnagiri, for Primary branch	465 0 0	3. Dearness allowance ..	657 6 0
		4. Raw material contingencies ..	1,183 5 3
4. Refund of pension contribution less Rs. 55-14-0 paid to the School Board, Ratnagiri, as Provident Fund subscription ..	59 2 0	5. Consumable stores contingency.	1,497 2 0
		6. Miscellaneous contingency ..	133 7 3
5. Municipal grant for 1942-43 ..	100 0 0	7. Rent, rates, taxes, contingency..	106 0 0
		8. Service, postage, contingency ..	30 0 0
		9. Apparatus, euipment, contingency ..	2,218 7 0
		10. Furniture, contingency ..	74 0 0
		11. Government scholarships ..	1,175 0 0
Total ..	3,019 11 3	Total ..	14,548 15 6

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